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The Cultivation of Rice in Japan—By Jessie Ackermann

AMONG all the industries and commerce of Japan no one thing figures so largely as rice, hence its cultivation is the most important factor in agriculture. It is impossible for one who has never lived in the country to fully understand the value of the services of the farmer, and to what extent he contributes to the success of commercial life. If he did nothing but furnish rice and rice-straw he would more than measure up to his share of contributions to commerce.

Rice itself is used for a great variety of purposes other than food. Millions of bushels are consumed in the preparation of the national drink, called sake. The amount may be understood when it is known that thirty-two per cent of the entire national income is derived from the amount used in this manner. Rice-flour is used in great quantities in the preparation of sweets in common use among all classes. The strongest paper and much writing material is also made from rice-straw, which furnishes supplies for endless industries. Matting for beds is padded with its longest stalks, horses and bullocks are shod with a poorer grade, houses thatched, rope manufactured, sandals woven, etc. The great variety of uses make the rice crop the most important feature of farming. Hence it is that more time is given to its most complete cultivation than to all other crops combined.

Two conditions are indispensable to success in rice-growing—rich soil and plenty of water. Terrace-planting figures largely in farming, otherwise there would be only a small per cent of cultivated land. The terraces are the work of uncounted generations, and the labor invested in beautifying the hillsides can never be estimated. All the stones, gathered by hand from the ground, have been used to build up and make strong the edge of each terrace, to secure it against floods or land-slides. In the construction of these great care has been taken to provide for water-supply, either by turning the tide of some natural water-course or leaving a place at the top of the highest terrace where water may be conserved against a time when there may not be a generous rainfall. Usually the sides of this reservoir are walled in by the stonework so common in Japan, a feature of striking beauty wherever it is found. From either this or some other source the water courses very slowly from bed to bed, flooding the small sections included within the miniature dikes, until the whole surface is softened. Then it is that the very trying preparation of each small field begins. In some places a bullock is used with a plow, and as a second process the space is again covered with a harrow, which is only a row of heavy spikes driven into a piece of wood and attached to the bullock by ropes. More frequently the work is done with a hoe, and the labor does not cease until the entire bed is reduced to a muddy paste. Nothing could be more praiseworthy than the manner—and cheerful manner at that—in which the farmer, and usually the entire family of workable age, including wife and daughters, set about a task unknown to women in other parts.

These flooded places very soon become the home of every sort of water-creature known in this mild clime. Water-snakes wriggle their slimy bodies through the liquid mass, frogs and lizards seem to enter a contest to see which will perform the greatest number of antics around the ankles and over the feet of the farm-hands, while leeches demonstrate the clinging tendency of their nature by retaining a fond hold of any part of the body exposed to an attack. It is a common sight to see hundreds of women wading about in these watery, muddy fields, a foot deep in the slush; in fact, millions of them spend days at a time in such a plight during the planting season.

Rice is planted in rows for the same reason the other grains are; as this necessitates transplanting, the first sowing of the seed is broadcasted in small seed-beds. Nothing is done by way of cultivation until the sprouts are ready to place in the prepared soil, with the exception of covering the seed with some sort of quick fertilizer; frequently rice-straw sprinkled with lime does the work. During the time while the seed is sprouting and attaining sufficient growth to be transplanted the beds are watched with great care during the day, and at night little lamps protected from the wind by old tin cans are placed in the beds to frighten away pests of any sort that might destroy the young grain.

The time of transplanting is the signal to draft every one into service. If there are not enough hands among the farmer's family outsiders are engaged. Men earn twenty cents a day and their board, while women, after a time-honored custom in more civilized lands, receive twenty-five per cent less for the same amount of work, done side by side with men in the same field. The shoots are pulled up by the roots, tied into small bunches and thrown into the planting-beds. A line is stretched from side to side, which is followed in setting the rows, that they may remain regular. Then it is that the hands wade in, regardless of all things. A bunch of young plants is held in one hand, the other being used in planting. Several spears are gathered from the bunch, and with these between the thumb and first finger the arm is thrust down almost to the elbow to reach the firmer soil, where the plants are set to take deep root for summer growth.

This planting takes place during the rainy season, when the rainfall is supposed to be sufficient to keep the beds properly flooded. Last season most of the planting was done with the rain simply pouring down for days at a time. Rain does not interfere with the operations in the least, for the rice-straw is put to service in making rain-coats. The long spears are woven close together into a band large enough to go around the waist. The band of a second piece fits the neck. When the rain strikes the straw it runs off over the smooth surface. This rice-straw coat is a great protection to the wearer. In addition to this the bamboo hats are about half as large as an umbrella. These

[CONCLUDED ON PAGE 11]

HARVEST SCENE IN JAPAN—GATHERING THE RICE CROP

FARM AND FIRESIDE

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A hand in the white space to the left means that we want *you* to read about

$1,000 in Prizes

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Very truly yours,
THE CROWELL & KIRKPATRICK COMPANY,
Publishers the FARM AND FIRESIDE.

WITH THE VANGUARD

READER, kindly send to the Editor of the FARM AND FIRESIDE a postal, telling what departments of the paper you like best. Please name two, at least, in the order of your choice. We will faithfully endeavor, by improving all of them, to reward you many times over for your trouble.

THE occasion was certainly unique when Harvard honored Prince Henry of Prussia with the degree of laws. In a notable address President Eliot said: "Never before has this democratic university been called together on purpose to do honor to a foreign prince. Weighty reasons must have determined such unprecedented action on the part of this society of scholars.

"In watching the social and ethnological phenomena of our own times we have seen that the largest contribution which a European people made in the nineteenth century to the population of the United States came from Germany, and that the German quota was not only the most numerous, but the best educated.

"We gladly welcome here to-day a worthy representative of German greatness, worthy in station, profession and character. We see in him, however, something more than the representative of a superb nationality and an imperial ruler. Universities have long memories. Forty years ago the American Union was in deadly peril, and thousands of its young men were bleeding and dying for it. It is credibly reported that at that very critical moment the Queen of England said to her prime minister, 'My lord, you must understand that I shall sign no paper which means war with the United States.'

"The grandson of that illustrious woman is sitting with us here."

By this reference President Eliot aptly illustrated the bonds of friendship that should forever hold together the three great Anglo-Saxon nations. United as friends they can do more to maintain peace, extend commerce, develop the arts and sciences, and advance civilization than any other possible combination of powers in the world.

THE OLEOMARGARIN BILL has been favorably reported by the Senate committee on agriculture. It is before the Senate for action. To make sure of its passage, now is the time for action. Let every citizen who believes that all articles should be sold for what they are write to the senators from his own state, asking them to support and vote for the bill. It is nearing the final stage of legislation. Act promptly, and urge prompt and favorable action, that the bill may speedily become a law.

THE SUPREME COURT recently declared the Illinois anti-trust law unconstitutional. Justice Harlan, in delivering the opinion, held that the exemption in the law in favor of live stock and agricultural products in the hands of the producer invalidated the entire law.

Regarding this discrimination in the statute Justice Harlan says, in part:

"What may be regarded as a denial of the equal protection of the laws is a question not always easily determined, as the decisions of this court and of the highest courts of the state will show. No rule can be formulated that will cover every case. But upon this question we have said that the guarantee of the equal protection of the laws means 'that no person or class of persons shall be denied the same protection of the laws which is enjoyed by other persons or other classes in the same place and in like circumstances.' We have also said that 'the fourteenth amendment, in declaring that no state shall deprive any person of life, liberty or property without due process of law, nor deny to any person within its jurisdiction the equal protection of the laws,' undoubtedly intended not only that there should not be arbitrary deprivation of life or liberty, or arbitrary spoliation of property, but that equal protection and security should be given to all under like circumstances in the enjoyment of their personal and civil rights.

"These principles applied to the case before us condemn the statute of Illinois. We have seen that under that statute all except producers of agricultural commodities and raisers of live stock, who combine their capital, skill or acts for any of the purposes named in the act, may be punished as criminals, while agriculturists and live-stock raisers, in respect of their products or live stock in hand, are exempted from the operation of the statute, and so far as the statute is concerned may combine and do that which, if done by others, would be a crime against the state."

The decision of the court applies in effect to the anti-trust laws of twelve other states, which contain exemptions similar to that in the Illinois law. It is not likely that much time will pass before all the state statutes affected will be remodeled. Like the trust itself, trust legislation is a matter of growth and development.

THE IRRIGATION BILL passed by the Senate provides that ninety-five per cent of all money received from the sale of public lands in Arizona, California, Colorado, Idaho, Kansas, Montana, Nebraska, Nevada, New Mexico, North Dakota, Oklahoma, Oregon, South Dakota, Utah, Washington and Wyoming shall constitute a special "Reclamation Fund" for irrigation purposes in those states and territories.

The plan provides for the gradual reclamation of a portion of the arid and semi-arid lands in the vast region to which it is to be applied. The bill is a compromise measure, and though the Eastern opposition to it is still strong it may pass the House.

DESIRING to please the readers the publishers of the FARM AND FIRESIDE are making plans for important changes in the paper, to go into effect in the near future. Readers, we now ask a favor of you. To help make the improvements desired we want an expression of your wishes. Therefore, kindly send us in brief form your suggestions and criticisms. A note or even a single sentence from you on a postal will be appreciated.

THE GRANGE, now stronger than ever before, is a solid foundation upon which could be built a larger organization of wonderful power for the betterment of affairs of both home and state.

THE movement to place the rural delivery of mails under the contract system failed. The lingering memory of "Star Route" frauds was enough to stop it.

As passed by the House the Rural Delivery Bill classifies the service and increases the maximum salary of carriers from five hundred to six hundred dollars a year.

THE HANNA-FRYE SHIPPING SUBSIDY BILL in a modified form passed the Senate March 17th by a vote of forty-two to thirty-one.

The bill provides for postal subsidies to American steamships carrying ocean mails, general subsidies to American ships engaged in foreign trade, and special subsidies to American vessels engaged in deep-sea fishing.

Unless it is made perfectly clear that the subsidies, amounting to several million dollars annually, will actually increase ocean postal facilities and aid in building up an American merchant marine—both worthy objects—instead of going as gifts to the owners of existing ships, there is little prospect that the bill will pass the House, at this session at least.

Agricultural News-Notes

Many of the Maine farmers are rapidly stocking their outlying pastures and scrub-by wood-lots with Angora goats.

The slaughter-house by-products, such as blood, bones, hair, etc., bring as much to-day as the flesh of the animals killed did a few years ago.

In Colorado, where irrigation is practised, it is estimated that it costs about thirty dollars to raise an acre of sugar-beets. Such is the opinion of Mr. W. P. Heddin, of Fort Scott.

The Georgia peach-growers do not count upon a sure peach crop until after the full of the moon in April. They say that they feel safe if that date is passed without injury to the fruit by unusually late cold weather.

It is stated that more than one thousand acres of grapes, mainly of the Concord variety, will be planted in northeastern Pennsylvania and northwestern New York this spring. Of the white grapes the Niagara will also be extensively planted.

By means of irrigation the desert lands in the vicinity of Indio, Riverside County, Cal., have now been utilized in the production of the celebrated Rocky Ford melon. The crop is considerably earlier than that of Colorado, and is proving to be a highly remunerative one.

While the progress of the German sugar-beet industry has to a considerable extent been stimulated by a system of bounties, very much more have the wonderful results accomplished been due to scientific chemistry. Between 1840 and 1900 the percentage of sugar in the beet was more than doubled, and the cost of production proportionably reduced.

Maryland's strawberry and blackberry king is Jerome A. Davis. He was formerly a New York commission-man. With the addition of one hundred and twenty-five acres this year he expects to ship not less than one million quarts of berries.

The Rocky Ford melon industry in Colorado is one of much importance. About twelve hundred farmers planted thirty-five hundred acres last year, and five hundred acres will be planted this season. Nearly five hundred car-loads of this melon were shipped to Eastern markets in 1901.

An Iowa agriculturist, after having conducted a series of careful experiments, has reached the conclusion that if the stalks, leaves and husks of the corn-plants are allowed to go to waste in the field not less than forty per cent, or almost one half, of the nutritive value of the plant is lost.

The Miami (Ohio) Valley experiments in improved methods of the culture and curing of tobacco are to be conducted on the farm of Mr. John B. Rohrer. Mr. G. B. Massey is to have charge of the experiments. It is expected that the result will be of much value to growers and packers.

We are rapidly becoming a nation of mutton-eaters. Notwithstanding the prices in January, 1902, ruled higher than in the same month in 1893, the receipts in Chicago (mainly from the Rocky Mountain states) were three hundred and seventy-two thousand four hundred and twelve head, or about twenty-one thousand more than in any previous January.

Go slow in increasing the corn acreage, especially of plowing up meadow, pasture or grazing lands. The present outlook indicates that there is a fixed determination on the part of corn-growers to plant more than the usual acreage this year, owing to the short crop of last year. Better strive to obtain a larger yield on the usual acreage by means of higher fertilization and better culture.

Prof. E. H. Jenkins, of the Connecticut Experiment Station, has recently issued a circular which should be in the hands of all progressive cigar-leaf tobacco-growers. He estimates that the area that will be grown under cheese-cloth this season will be increased to one thousand acres, whereas only about fifty acres were grown under cover last year. It is hardly to be expected that the best results will be attained without a few years more of practical experience under the direction of scientific experts.

Western corn-growers will be surprised to learn that Mexico only ranks third in the world's production of corn. In 1898 the crop amounted to one hundred and eleven million three hundred and forty-seven thousand bushels, and that the corn crop is a little over twelve times as large as that of wheat. Upon the "tortilla," a kind of corn-cake, the native Mexican depends almost exclusively as a staple article of food.

Many farmers in the West have contracted to grow tomatoes for the canneries at six dollars to seven dollars and fifty cents a ton, the average price being six dollars and fifty cents. The growers in Maryland, however, refuse to contract for less than seven dollars to eight dollars a ton, as more money must necessarily be paid out for fertilizers than in the West. As the usual yield ranges from eight to ten tons an acre the tomato crop should be a fairly remunerative one.

The increased use of sugar in the army ration of the German soldier, of whom great muscular exertion is required, makes it apparent that the masses of the people would be greatly benefited by its increased use as an article of diet. The more cheaply sugar can be produced by improved methods of cultivation and manufacture, either from the cane or sugar-beet, the more easily it can be placed within the reach of the consumer, and the better it will be for the general health of the working-class and the vitality of the race.

RURAL AFFAIRS

Root-knot in Tomatoes A reader in Sanibel, Fla., sends me a sample of tomato root afflicted with some sort of root-knot, and says that he sometimes loses several acres of tomatoes by this disease, a remedy for which is sadly needed. Now, whenever I am in trouble of this kind, whenever a new disease or new insect appears that I have not yet fully learned how to handle, I first look to the experiment stations or to the Department in Washington to help me out. In many cases the stations or the Department can give the desired information and suggest modes of treatment. If the enemy is really new and not fully investigated they desire to have a chance to investigate it. Therefore to communicate with them is a service to them and to yourself. The pathologist and physiologist of the Department, to whom I forwarded the sample of tomato root with request for information, says:

"The knots on the roots of tomato-plants are often produced by a small worm, known as the nematode worm. A microscopic examination of this root, however, shows that there are very few nematode worms on, or in, the diseased parts, while they are filled with a fine thread-like fungus. This leads us to the belief that the disease is produced by the fungus, but this can be determined only by investigation. We have experiments under way now looking to the solution of this problem, and if any definite conclusions can be reached we will report to you later.

"In regard to the treatment of this disease, the most important point at present lies in the rotation of crops. Do not grow tomatoes in soil where this disease has appeared for several years at least. It is possible that a resistant variety of tomatoes may be found that will resist this disease, as has been done in the case of the root-diseases of cotton and cow-peas. While this offers no immediate solution of the question, it is, I think, the most hopeful one in the end."

Carbide Refuse A Michigan subscriber asks what use, agriculturally or otherwise, may be made of refuse carbide from a gas-plant. If the refuse referred to is the spent carbide which comes from the acetylene-gas generators, all that can be said about it at present is that the acetylene people have recommended it as a most effective means of repelling all sorts of injurious insects in our gardens. From what I know about the stuff by personal observation I believe it can be applied to the surface in reasonable quantities without endangering the life or health of common plants. Its smell is bad, and I believe bad enough to drive insects away. But I have not learned of any systematic trials having been made with this comparatively new insect-repelling substance.

Coal-ashes as Manure An Illinois reader asks me about the effects of coal-ashes when applied to the soil. It is true that coal-ashes do not rank very high as a manure. With the exception of the little potash and phosphoric acid in the possible admixture of wood-ashes from kindlings, etc., there is really not much actual plant-food contained in coal-ashes. Yet I am not prepared to pronounce the labor spent in applying coal-ashes to our lands entirely wasted. Far from it. The effects of such applications are often very striking; so striking, indeed, that I always gather up every bit of coal-ashes accumulated on the premises during winter, and apply to the land with a free hand. If the texture of the soil is faulty, being either too sandy and porous or too clayey and close, the admixture of coal and other ashes will improve it in either case. It will make the land more retentive of moisture and the clay more porous. In short, I would not have those unsightly heaps of ashes lying about and in the way on the premises. If you can sift them rather coarsely, I would apply only the finer stuff to the land, using the larger particles, cinders and clinkers, etc., for filling up depressions and wet holes on the premises. If you can pick up a few loads occasionally from a near neighbor, a school-house or church, etc., it will pay you to gather them in and put on your land.

Saving Wastes I never did like to see anything, no matter of how little value, go to waste. If I find a crust of bread or a cooked potato thrown on the floor by the children, or possibly picked up and dropped into the coal-scuttle by the women-folks, I am quite sure to pick it up again and put it into the mess for the chickens. Any refuse matter that comes from the kitchen or the dinner-table and is fit for poultry-food is carefully saved for that purpose. The next quality of waste goes to the pigs. But nothing that is of any feeding value is ever allowed to go to waste, not even in times when feeding-stuffs cost far less money than they do just at this writing. I was reminded to speak of this by some remarks of Mr. Root in "Gleanings" about feeding cull beans to poultry. Hens usually refuse common beans, whether white or colored. But occasionally a fowl will learn the trick of swallowing beans, and will be induced to eat quite a number of them. Neither will pigs be readily made to eat raw beans, except soy-beans or cow-peas. For these reasons it is an undoubted fact that a great many cull beans, old seed-beans, spotted beans and weevil-eaten beans are simply thrown away, into the fire, on the manure-heap or the rubbish-pile, and that a lot of material of great food value is thus simply allowed to go to waste. "Gleanings" remarks that "the successful farmer should see to it that his chickens, pigs, cows and horses are 'educated' to eat things that might otherwise be thrown away," and quotes from the "Rural" as follows: "We are able to report an increasing partiality for these nitrogenous foods—crimson clover and cow-peas—among the two flocks of chickens kept on the 'Rural' grounds, and correspondingly good results in the way of egg production. Hens readily take to clover in any variety, but they are often shy of beans, seldom eating them uncooked. An appetite for raw peas or beans may be considered an acquired taste, coming on gradually. Our hens ignored the cow-pea seeds the first season they were grown here, and developed the taste only late in the winter when scratching the pods open by chance in a sheltered part of the field. The example of contented old biddies coming in with comfortably extended craws and an urgent thirst for water to complete the swelling process proved contagious, and they all now hurry to the field at once on being released from the yard. There can be no doubt as to the beneficial effect of the exercise needed to get the pods open, nor of the high food value of the beans themselves. . . . The second flock had no access to the fields, but acquired the taste from scratching the gathered pods shelled for seed. An increase in egg-yield was noted in both cases as quickly following the ripening of the Early Black cow-peas, which is the variety best suited for us. Cow-pea seeds when ready for market are too costly for poultry-food, but we are convinced that a patch of these hustling land-improvers is a good investment when handy to the chicken-yard."

My own experience with hens and soy-beans is very similar to that of the "Rural's" editor with his hens and cow-peas. All fowls take readily to common peas as soon as they get even slightly acquainted with them. Sometimes I have had hard work to keep neighbors' half-starved chickens away from my garden-peas, even while yet green in the pod. Hens used to peas tackle my soy-beans (Early Yellow, nearly round-seeded, and much resembling common field-peas in general appearance) without hesitation, but when not acquainted with peas will need a little coaxing by hunger or otherwise to get them to fill up on soy-beans. But they soon learn to take them readily, and the effect on the egg-yield is decidedly beneficial, as noted by the "Rural." But it is not necessary to take great pains in order to get all the food value out of soy-beans, cow-peas, common field-beans or common field-peas. The raw and natural state is not the only one in which they can be used. If we cannot readily get our fowls or pigs to eat any of these things as they come from the field we can cook the beans and mix them with bran, corn-meal or other meals; or we can grind them with other grains, thus making a palatable mess.

Mr. Root tells us that he cooked a lot for poultry, and the mess looked so inviting that he tasted of them, and found them exactly as good to eat as beans that are all white. He also cooked a lot of old Red Kidney beans for his young poultry. The birds had not yet learned to eat beans, and wouldn't. So he took away their other feed and tried starving them to it, but they would not eat the beans even then. Finally he mashed the beans up and stirred in some chop-feed, so as to make it look like their daily mash, and it was all gone in a twinkling. He was obliged to go to all this pains in order to convince them that beans are good to eat.

T. GREINER.

SALIENT FARM NOTES

Better Management When I see how some farmers manage I wonder whether they lack skill or judgment. If it were not that almost any worker can make a living farming there would be thousands of agriculturists bankrupted every year. Any one, almost, who will work can make a living on a farm if he owns the farm. But when it comes to making a living and making a farm pay for itself at the same time, then skill and judgment of a high order are required. If I were able to buy but one acre of land I would buy that acre rather than rent a spot to live on. The first object of every young man should be to secure for himself a home, for "be it ever so humble, there's no place like home." Once let a man establish himself in a home of his own and he is in a great measure independent. Then all that is required of him is to live, hold his home and lay aside something.

Not long ago a young farmer said that he had about come to the conclusion that he could manage his farm better than he had the past three years, but he did not know exactly how to better his management. An old farmer standing by said, "I can tell him how to get at that matter easy enough. Just analyze your operations of the past three years, and note where you made a mistake or where you could have done better if you had known what you did at the close of the year. At the beginning of each crop year I start out to do a little better than I did the previous year, and though I do not always succeed, the effort is inspiring and never fails to result in some betterment. A big debt rests lightly on the shoulders of a strong young man, and he should put forth every effort to rid himself of it before it becomes heavy; in fact, before he feels the real weight of it. A man cannot pay nearly one hundred dollars an acre for land and expect to make the farm pay the bill if he manages it in the old slipshod way. Hundred-dollar land should grow a hundred bushels of corn or it is not worth the money. With the best tillage and the best of seed of the best variety for the locality strong soil will produce a hundred bushels an acre in a good crop year, and one should believe every year will be a good crop year until it proves itself otherwise. He should start in with the intention of getting the full hundred bushels, doing every stroke of the work in the manner best calculated to bring about that result. When I bought the farm I live on it had been a tenant-farm about twelve years, and with the best tillage it would not produce sixty bushels of corn on any one acre; but clover soon remedied that. Clover and sheep brought it up rapidly, until it is now quite fertile.

"Many farmers," continued the old man, "manage their farms as though they were tenants and expected to be compelled to move off within a year or two; that is, they try to get all they can from the soil this year, and let future years take care of themselves. If one expects to make his farming pay he must keep an eye on the future. If one can manage his land so as to make ten acres produce a thousand bushels of corn, why should he continue to farm twenty acres to produce the same quantity? If clover and sheep, or clover and manure, or even clover and hogs will bring land up to the production of what many farmers would term a double crop, it stands to reason that they are the agencies to employ. Employing them shows good judgment, and the production of a double crop is merely a matter of agricultural skill, the skill that every farmer can acquire if he earnestly sets about it. If I were to go in debt for forty acres now I would make the notes payable the fifth and seventh years. I would bring the land up with cow-peas and clover the first three years, and make it produce enough in the next four to pay the debt."

These things are easy enough for a skilled farmer, but the inexperienced will meet with many difficulties that are made greater because unforeseen. Not one man in ten thousand can jump into a successful business at once. He must learn. Many a merchant who is now wealthy began business with a ten-cent store, and built up as he acquired experience and skill. This is the rule in all vocations requiring skill. All of the most successful men began at the bottom and worked up. Then why should not the young farmer begin with a five or ten acre tract and work up? Would it not be better than beginning as a tenant and being governed and directed by another in every step? I think so.

FRED GRUNDY.

Sharples "Tubular" FARM Cream Separators

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Tubular Hand Separators and Steam Driven Separators for large dairies are the delight of every user, they require so little power, skim so clean, and are so simple, easily washed and kept in order. We warrant them to give enough more butter from the same milk than any other separator, to pay over 6% interest on their whole first cost. A free trial to every one. Book, "Business Dairying," & catalog No. 112 free.

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OUR FARM

Farm Theory and Practice

Potato Failures.—One very common cause of failure in potato-growing is poor seed, and some growers do not realize this for the reason that poor seed may give them a good yield in a favorable season. If the soil is rich, and the weather favors the plants, quite poor seed may start a crop that will yield very well. The yield is good despite the character of the seed, and then the grower infers that such seed is good enough, but in a bad year he makes a failure and attributes it wholly to conditions over which he has no control. The foundation for a good yield in a rather bad year is laid when seed of the greatest vitality is planted. A strong sprout is wanted—one that can help itself. As the potato is most vigorous in a cold climate the seed should come from such sections at least every second year. It is bad economy to plant anything that has not a lot of vigor in it. Don't start the crop at a disadvantage; there is much surer profit from an investment in the very best seed obtainable.

It is a common expression of some growers that they cannot afford to get potatoes from a distance for planting. Usually they are the ones who can least afford not to do so. If you have been using sprouted and inferior stuff, let me urge a test to prove the correctness of my assertion. Get some solid Northern potatoes of the variety that is being used, and plant a few rows in the center of the patch or field, and dig the strip separately. I do not recall a single instance where this has been tried that the grower did not regret at digging-time that the more vigorous stock had not been used. The difference is less marked in a good year, but it exists in some degree any season, and amounts to a big thing in an unfavorable year. We are after a crop when others fail and prices are high, and no one has a right to expect it from such seed as many growers are using. If your supply for planting was grown from small potatoes, or if it is sprouted and weakened, make the test for yourself along the line suggested.

Cow-peas.—Suppose you arrange to test the value of the Southern field-pea—the cow-pea—this year. The value of pea-vine hay is beyond question now. It is greater than that of clover, having more strength. The vines are hard to cure, but any rich feed is difficult to cure. Sow about five pecks of seed an acre, using all the hoes of a grain-drill, or broadcast the seed and cover with a harrow. In the states of the latitude of Pennsylvania or Illinois try the "Black" variety. The vines make a great fertilizing crop, preparing land for a good cash crop, but they may be worth much more for feed. Hundreds in the North are growing this pea both for feed and for fertilizing purposes, and thousands will try it this year. Sow the last of May, preparing the land as you would for beans. Most animals must be taught to like any new feed, but soon they acquire the taste for cow-pea hay, and like it greatly. Little or no grain need be fed with it. Try this crop on a small scale for yourself.

Set Fruit-trees.—Much land is not well adapted to fruit-trees, and crops other than fruit may be more profitable for market, but all summer and fall fruit should usually be grown on the farm anyway. The home should have an abundance of apples for use until winter apples are ready, and there is no better way of getting good varieties than by grafting. Start trees where wanted, and then get scions from trees in the neighborhood if there are varieties that please you. Then it makes no difference whether you have the name correct or not, you have the apple you want. It will not do to select varieties upon the representation of one who has not fruited them in your locality. While some new varieties of good promise may be tried, dependence should be placed on those that are known to please in the locality, and nothing is surer than grafting with scions from the trees you know. The trouble is that neglect of planting is so easy. Set the trees and hasten the time when the home has an abundance of various tree fruits.

Nitrate of Soda.—If early vegetables are wanted, try some nitrate of soda as a fertilizer in the garden. Even if the soil is rich it will not push growth in a cool spring, and this is partly due to the fact that the nitrogen in the soil does not become available in cool weather. It must change into the form of a nitrate before plants are able to use it, and heat is needed for this change. The nitrate of soda for sale by many dealers in fertilizers is immediately available for use by plants, and is especially valuable on all plants that make much leaf-growth, like lettuce, cabbage, etc., but it is good for early potatoes, tomatoes and other garden crops. If the spring is cold and dry, try this nitrate on the meadow that is backward. A dressing of seventy-five to one hundred pounds an acre may pay. Now is the time to try these things on a limited scale, and spring is the best time of the year to a live man, because there is opportunity to try again to do one's best, and that means some experimenting.

David.

How to Prevent Oat-smut

Farmers who grow oats know how much grain is at times destroyed by smut; the amount of smut ranges from almost nothing to one third, or in extreme cases even one half, the entire yield. On an average it is computed that this loss is not less than six per cent of the annual Ohio oat crop, or four hundred and fifty thousand to five hundred thousand dollars each year. This loss is practically all preventable by a simple method of treating the seed-oats to kill the smut-spores that are sown with the seed only, and the experiment station has proved this method to its entire satisfaction. This is known as the formalin method of Bolley. Formalin is a clear liquid, a solution of formaldehyde in water, and may be purchased at drug-stores for about fifty cents a pound. Each pound is sufficient to stir into fifty gallons of water, and will treat fifty bushels of seed-oats; one ounce is enough for three gallons of water, and will treat three bushels of oats. The amount purchased will be determined by the number of bushels of oats to be treated. The formalin is not poisonous, though not wholesome; it is well to avoid smelling of the strong solution as purchased, because it is irritating to the nostrils. The very dilute solution used for oat-smut is not objectionable.

To Treat Seed-oats for Smut.—Having the solution made at the rate of one ounce of formalin to three gallons of water, well stirred, and one gallon of solution to each bushel of seed to be treated, apply this with a sprinkling-can to the oats in piles on a tight floor. Grain-piles should not exceed about six bushels, and the number of piles will follow from the amount of seed. Sprinkle each pile in turn, shoveling thoroughly, knowing how much solution is applied; continue in each case until the solution tends to run out on the floor despite the shoveling. Usually one half gallon or more a bushel may be sprinkled on the first round, when the one pile is passed for a few minutes while another is handled in the same way. Upon a second sprinkling of each pile as much solution is used as will be held; then with a third or fourth repetition the gallon a bushel may be used. After this shovel over and leave in low, flat piles over night or for not less than four hours. The seed may then be spread thin on a floor, and shoveled over occasionally to dry out for drilling, or it may be sown wet if broadcasted. If in weather when proper drying of the seed is secured, the treatment of the seed may precede the time of sowing by some weeks. Seed treated in this manner is not poisonous, though scarcely suitable to be fed to horses.—From Bulletin of Ohio Experiment Station.

Evaporated Potatoes

The evaporation of potatoes is a new and profitable industry opened in the Northwest to supply the growing demand for potatoes in the Alaskan gold-fields and the Oriental islands. By this process nine pounds of fresh potatoes are pared, cooked and compressed into one pound of the evaporated product. The process of evaporation takes out the water—supposed to be about eighty per cent of the original potato—and leaves the solids in a thin slice resembling gelatin or wax. When this is soaked in boiling water for a few minutes the crisp potato reopens, and one may enjoy mashed or fried potatoes in the far-away Northland or the distant homes of the Philippines.

The most extensive plants for the manufacture of evaporated potatoes are owned by the Washington Evaporating and Preserving Company, with factories located in various cities of the Northwest. Small, unmarketable potatoes are generally used for evaporating. These may be purchased at from ten dollars to fifteen dollars a ton. Girls and women are employed in the various peeling, slicing and packing departments, and paid by the package or bushel. They get from seventy-five cents to one dollar and fifty cents a day, the price depending altogether on speed and knowledge of the work.

A peeling-machine having the capacity for preparing three tons daily is one of the necessary assistants. This machine comes from Germany, and costs at the factory about two hundred and fifty dollars, and the freight is equal to one half additional. The machine is run by steam-power, and peels large and small tubers with equal swiftness. Potatoes must be clean and sound to insure good work. The peeled tubers come from the machine and drop into cold water for washing. They are then taken out on tables and hand-sliced, the slicers using small machines similar to vegetable-cutters.

The sliced potatoes are steam-cooked for several minutes before being placed on the drying-trays. Women and girls pick the hot slices from the steamed pans and place them in thin layers on wide, shallow trays. Wire screens are then fastened securely over the trays to prevent dust from settling on the sliced product, and the trays are placed in the evaporators. The evaporators are made in the shape of flour-mill bolting-boxes, and contain several hundred trays, each about three feet square. The drying pan, or tray, is placed over two steam-heated pipes and left there for some time before removing to higher points, where the heat is gradually diminished.

When taken from the evaporating-trays the potato-slices are very hard and crisp and may easily be taken for pieces of partly colored glue or wax. After lying in a cooling-room for some hours the slices are sacked and prepared for market. Cotton bags holding fifty to one hundred pounds are used for shipping from the evaporators to the headquarters, or distributing-point, at Seattle, Wash. Here the slices are packed in tins weighing five, ten and twenty-five pounds each, and placed on the wholesale market. The potatoes thus prepared sell at retail in the cities of the Pacific coast for twenty cents a pound, and for one dollar or more in Alaska and the islands of the Pacific.

The same factories are employed in desiccating potatoes and other vegetables for the compressed market. This process chops the tubers into finer pieces, and the dried product resembles granulated gelatin or other waxy productions. This process removes at least ten per cent of the starch from the potatoes, in addition to the water taken out by evaporation. The desiccated vegetables are used extensively in making soups and combination dishes of various kinds. There is no waste from the use of either, and the potatoes are always ready for immediate preparation. Some people in cities think evaporated potatoes cheaper than the green product.

Joel Shomaker.

Paints and Painting

On the farm the durability and beauty of a large amount and great variety of property depend upon paint. As it costs money to paint houses, barns, vehicles and farm machinery, it stands the farmer in hand to know that the paint is good and properly applied.

After an experience of twenty-five years I am convinced that summer is the best time for outside painting. In hot weather the lumber is dry, or soon dries out after a rain, the pores of the wood are wide open, and the priming coat takes a good hold; but in spring and fall the frequent rains cause the pores to close up, and the wood contains dampness, hence the paint cannot take a good hold, and it is liable to crack and scale off.

The best paint to use for outside white work is the old-process white lead mixed in pure linseed-oil, with the addition of ten per cent of zinc white. It does not require a professional to mix this paint.

For the priming coat mix six pounds of white lead with one gallon of boiled linseed-oil, and stir it well together. Put no zinc in this coat. If it is to be a white job the paint is ready for use. If it is to be two-coat work mix as follows for the second coat: Take twenty-five pounds of white lead, five quarts of boiled linseed-oil, and mix them thoroughly together. Then mix two and one half pounds of zinc white in one pint of boiled linseed-oil (have the pint of oil hot), and thin with turpentine to the consistency of the white-lead paint. Pour the zinc into the white lead and give it a stirring and the paint is ready for use. If, however, it should be a little too thick to go on well use a small quantity of linseed-oil to thin it. Mix your paint but a few hours before you are ready to use it.

When buying brushes buy the best. Open

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THESE selected bone-black fertilizers are guaranteed to be so fine and dry that they will work with perfect success in any drill or planter.

They are made in various brands, so prepared as to provide the Grass, Grain, and Vegetables with just the needed nourishment at the proper time.

We are always glad to correspond with farmers, and furnish them with full information regarding the fertilization of any crop.

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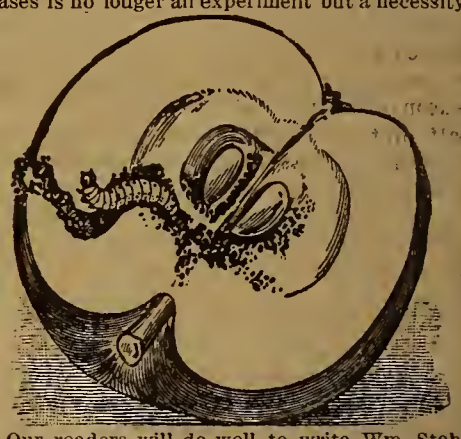
SPRAYING FRUIT-TREES
The question of spraying fruit-trees to prevent the depredations of insect pests and fungus diseases is no longer an experiment but a necessity.



Our readers will do well to write Wm. Stahl, Quincy, Ill., and get his catalogue describing twenty-one styles of Spraying Outfits and full treatise on spraying the different fruit and vegetable crops, which contain much valuable information, and may be had for the asking.

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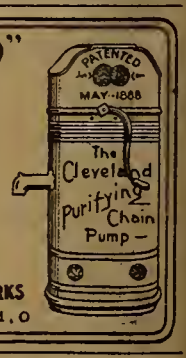

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the brush and look at the center filling. If it is good you will find it filled with flexible, springy bristles. The poor ones you will find filled with uneven, stubby stuff, with a very thin row of good bristles on the outside. The nearer the filling is like the outside, the better the brush as a rule.

To break in a new brush, hold it up handle down, and turn one half ounce of water into the butt, then set aside for a few hours in the same position. This will swell the handle and tighten the bristles.

Do not set the brush in water until it has been two days in paint, because the bristles will absorb water, and there it will remain, taking all the spring out of the bristles and leaving the brush soggy. A good way to keep a brush while breaking it in is this: When through work for the day wrap a piece of paper around it, turn the lower end of the paper square across the end of the brush, and then set it in a pot of paint.

Always bear in mind that to do good work the brush must be square across the point. You might as well try to do good work with a hen's foot as with a brush which has been worn to a round point.

When buying paints it is a good thing to look after weights and measures. For instance, the kegs are weighed with the material, and whatever the keg weighs the consumer pays for as so much lead. A twenty-five-pound keg when emptied weighs two and one half pounds. Four of them, which weigh one hundred pounds when filled, weigh ten pounds when emptied, hence the consumer is short ten pounds on every hundredweight he pays for. The one-hundred-pound keg is weighed to the consumer at five pounds. The two-hundred-pound keg and the five-hundred-pound cask are not weighed in, but the material is all there—full two hundred and five hundred pounds. With white lead at present prices the consumer can save one dollar and thirty cents by buying his material in two-hundred-pound packages instead of twenty-five-pound kegs.

If you will examine the measures in which some retail dealers measure oil you will find them badly gummed up. A friend of mine who bought his oil from a retail dealer noticed he was getting short gallons. He measured his oil as he bought it during the season, and found he was falling short one half pint on a gallon, and the shortage increased as the season advanced and the skin of dried oil became thicker in the measure.

In the fall my friend presented a bill to the dealer for ten dollars, the price of the oil which he had been beaten out of by the dried oil in the measure. The dealer paid it after my friend said to him, "It was probably the result of negligence on the part of the clerk, and not your intention to cheat, which caused the shortage, but if I have to go to law to get my money back I shall reverse this statement, and some other painters may get hold of the idea." V. B. Grinnell.

Correspondence

From Washington.—I have been a constant reader of your paper for a good many years, and have been a citizen of Columbia County, Wash., for over thirty-one years. I read a Washington letter in the January 1st number, which is hardly a fair description of the eastern part of the state. We have but little level land in this county; it is generally rolling, and some is hilly. It is farmed by the latest-improved machinery, headers and combined harvesters. The land is very productive. It is no uncommon thing to raise thirty to forty bushels of wheat to the acre—in some instances fifty bushels and over—barley fifty to one hundred bushels, and other things in proportion. We do not raise corn to any great extent, as the nights are too cool for it. While the farm-land is clear of timber except when planted, there is an abundance of the finest kinds in the mountains near by and along the creeks. In regard to the winters and snow I do not remember of seeing snow lie on the ground for more than three weeks at any time in the last thirty-one years; some winters there is not enough for sleighing. We have frequently during the winter months what is termed the Chinook wind—a warm wind from the sea—that melts the snow and makes the air like spring. I am not a land agent, but a plain farmer and stock-raiser. I believe for a healthful climate and productiveness of soil this country is hard to beat. F. G.

Covello, Columbia County, Wash.

From Nebraska.—In Cedar County farming and stock-raising are the chief occupations of the people. The soil, very productive, is a black loam mixed with sand. We raise all kinds of grain and vegetables, the latter sometimes assuming huge proportions. I have raised beets which weighed fifteen pounds apiece, and Mammoth Pearl potatoes that weighed three pounds each. Besides wheat, oats, barley and buckwheat we raise giant broom-corn, sugar-cane, field-corn and peanuts. Our farmers who are engaged in stock-raising find it a profitable business, many of them keeping as many as five hundred head. Those who raise hogs for the market do quite as well, as pork brings from $5.75 to $6 a hundred, live weight, while the cost of feeding is light. Most of our land is rolling prairie, but as every farmer has planted a grove by his house it presents a pleasing aspect to the beholder. Timber grows plentifully along the Missouri River. The native kinds are cottonwood, box-elder, oak, ash and elm. Different kinds are also being cultivated—such as catalpa, soft maple, walnut and mulberry—thus giving us fuel, shade and ornament. A good many fruit-trees have been planted. Apples in bearing are Ben Davis, Wealthy, Whitney No. 20, Duchess of Oldenburg, Maiden's Blush, Winesap and good varieties of crab-apples, also seedlings. We have a good many native plums, like Miner and Forest Garden varieties. Mountain Dwarf June-berries and the buffalo-berry are very hardy, and do well. Wild grapes are in abundance, and we grow the Concord, Clinton and Delaware. Wild cherries and the blackcap raspberries grow wild here. Gooseberries also grow wild here in the timber. The barberry, a hardy plant that makes a beautiful, lasting hedge, is being planted; its red berries are good for canning, and make an excellent wine. Our roads are nearly always in good condition. The atmosphere is dry and very refreshing. Chills and fever are almost unknown. We have many excellent churches and school-houses. C. D.

Saint Helena, Cedar County, Neb.

From Washington.—I have read a communication to you from Mrs. M. L. regarding the state of Washington, which seems, to put it mildly, very inadequate. I have lived here in Pierce County, eighteen miles from Tacoma, for twelve years, and can therefore speak with some knowledge of conditions west of the mountains. First, then, there are many acres of railroad land all about here which can be bought at from $3 to $6 an acre. The good soil is by no means confined to the river-bottoms. I live on the shore of the Sound, miles from any river, but there are scores of acres of the richest kind of black, damp soil here, which needs no irrigating, and will need no fertilizer for years, though cropped annually. I do not think there are more than one hundred days of heavy rain here during a year. It seldom rains from the first week in June until in September, and then only for three or four days until November, which is usually the dampest month. From the first of January until June we have just about as much rain as you get in the Eastern states, and no more. Sometimes there is a little snow here through the winter, and sometimes none. I agree with Mrs. M. L. that the land is hard to clear, but no more so than woodland in the Eastern states. Isn't it a little inconsistent that "wages are high, but work hard to obtain?" Men are wanted for all kinds of work at good wages. Living is no higher here than in the East, according to market reports. Good flour sells for 75 cents a sack, and potatoes retail at $1 to $1.25 a hundredweight. Sugar is $4.50 and $5 a hundred. We have no blizzards, no cyclones, no lightning and no killing heat nor cold. There is a good market for all we raise, and it is being extended in the Orient and in Alaska, so that I think there is no danger of its being oversupplied. I might mention other advantages, but do not wish to make a lengthy article.

Mrs. J. E. F.

Longbranch, Pierce County, Wash.

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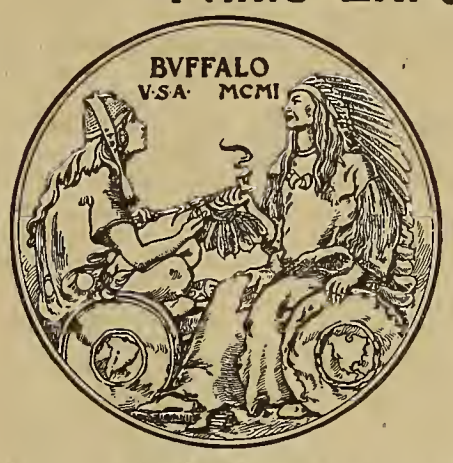

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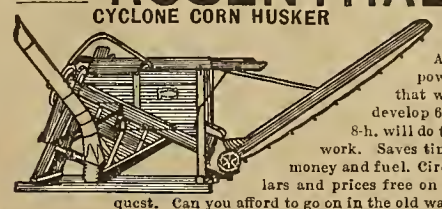

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Catalog FREE. Hercules Mfg. Co., Dept. O, Centerville, Iowa.

Notes From Garden and Field

What to Plant Next.—One of our readers some time ago asked me whether potatoes could be grown profitably on a blue-grass sod. Perhaps they can. It depends on the quality and texture of the soil itself. For the main crop I usually try to have a piece of loam that has been recently in clover, the potatoes either following directly after the clover, or some other crop—corn, for instance—being sandwiched in between the clover and the potatoes. The sod should be well rotted in order to give the potato crop the best chance. For that reason it is usually advisable, if potatoes are to be planted on sod-land, to plow as early in the fall previous as may be practicable. In spring the land should be thoroughly torn up with pulverizers or other tools, and if possible replowed and refitted. For early potatoes, whether for market or home use, a piece of warm, new clover, if of such character that it can be thoroughly pulverized, will be my first choice. But most people like to have a little patch of some very early potato in their garden, and the ground there is usually rich old garden-land that may have been under continuous cultivation for many years. Sometimes I am enabled to plant early potatoes with some other crop, such as squashes, melons, etc., the potatoes being planted very early, with every second or third row left vacant, the squashes or melons to be planted a month or so later, and the potatoes to be dug early enough to make room for the running vines when such room is needed. Or I may plant early potatoes as a first crop, to be followed by celery, late cabbage, bush-beans, etc. In all such cases I want the very earliest good potato that can be had, and I have not yet found it advisable to change the old Early Ohio for another. The Ohio is still good, and sometimes, especially when planted somewhat close, is also quite productive. I have, in rich garden soil and in a good potato season, repeatedly seen it produce at the rate of more than four hundred bushels to the acre. In one of our prominent seed catalogues I find the following truthful description of it: "In color it is a dull red. It matures a week earlier than Early Rose. It succeeds best in a rich, loamy soil, and is not recommended for light or sandy land. The flesh is solid and of extra-good flavor and mealy quality. Its extreme earliness and the fact that it is mealy when partially grown make it a great favorite with market-gardeners and fully atone for its lack of beauty. It is not remarkable as a heavy bearer, but its character sells it and compels many truckers to call it their most profitable early sort." In regard to the point of "beauty" it depends on the way the Ohio is grown. I have seen really beautiful tubers of this sort dug out of black, mucky soil as smooth and as clean as could be wished. The tendency of the Ohio, however, when grown in old, highly manured garden-land, is to become more or less scabby, and this tendency must be headed off by proper treatment. I have had several new potatoes on trial which seemed to resemble the old Ohio so closely that I was unable to tell them apart as grown on my grounds. Among these were the Early Andes and Early Dawn—good sorts, no doubt. As a new extra-early sort the Eureka Extra Early has been introduced. I may have had it on trial on a very small scale, so small that I cannot remember exactly how it turned out. I shall give it another more thorough test. For an early sort of recognized worth we have the Bovee. Many reliable experimenters pronounce it even earlier than the Ohio, with the advantage of having perfect shape and high quality. In my trials it was behind the Ohio in season.

Treating Early Seed-potatoes.—I have repeatedly spoken of my favorite way of treating early seed-potatoes, both with a view of getting them to start early and promptly when planted, thus making the crop as early as practicable, and of protecting them as much as possible from the attacks of scab. My first early seed-potatoes are invariably taken out at this time to the greenhouse and spread in single layers under the benches, where they are more or less exposed to the light, occasionally even to direct sunlight. Usually I put them on a board floor or set them seed-end up and very closely together in shallow boxes or flats. In such position they are prevented from striking root, which they would do if placed directly upon moist soil. The light "greens" them and develops one or two strong, stubby sprouts from the seed-end. Seed thus treated will grow vigorously and promptly as soon as planted in properly prepared soil. Of the Ohio I like to plant plenty of seed. Of course, when seed is scarce I may be obliged to cut the pieces somewhat small, even to one or two strong eyes to the piece. I try to have enough Ohios so that I can plant whole tubers of less than medium size, or at least half tubers of a little over medium size. Heavier seeding, in my experience, has seldom or never really failed to give me an increased yield of Early Ohios and similar sorts. A few days ago I came across the advice in some agricultural paper to reject the seed-ends of potatoes for planting. Don't you follow such advice. Nature intended the seed-end of the potato for planting, and put into it more vigor and push than into any other part of the tuber. The seed-end will give you the earliest and strongest plants every time. Before planting the Early Ohio, however, or any other first early potato, I would not neglect to give a little additional treatment for scab. Either soak them for ninety minutes in a solution of two ounces of corrosive sublimate in fifteen gallons of water (and don't forget that this is a deadly poison, although good for an external wash), or expose the tubers for a while to the direct action of the sunlight, turning them occasionally so that the sun's rays will strike every portion of each tuber. Then plant, and take good care of the patch. The drought of early summer is the great enemy of the crop, and often materially reduces the yield. It brings on sunburn, early blight, etc., and often results in a premature dying down of the whole plant.

Chicken-proof Fence.—Some people fence their chickens in, others fence them out. Farmers with plenty of land can usually manage to let their numerous fowls have free range over meadows and in orchards or woods and yet keep them out of the garden near the house. My hens seldom offer to do much damage in the garden, except in early spring, when the garden is freshly plowed and planted. I take a little pains at that time to scare them out of the garden-patches, until they begin to see that they are not wanted in the garden and that their safety lies in remaining in the orchards back of the barn and hen-house. But where space is more limited I may have to put a fence either around the garden or around the hens. Usually it takes a higher fence to confine hens in the rather limited yard than to keep them out of the garden. My choice for a poultry-proof fence is a wire netting, such as is made for the purpose; but I have frequently constructed a cheap fence around the garden with a few strands of common fence-wire and cheap laths woven into it.

T. Greiner.

Orchard and Small Fruits

CONDUCTED BY SAMUEL B. GREEN

Grafting

"Stock" is the term used to indicate the plant grafted upon, whether large or small.

"Scion" is the term used to express the part inserted, of whatever size or form it may consist. Scions should be of the new, well-ripened growth of the season. If scions are to be used in the spring they should always be cut late in the fall (except plum), as they are liable to be injured by the winter. However, spring-cut scions may often be used successfully, but it is not safe to trust to them, especially if when cut open the heart-wood appears dark-colored. Scions should not be cut when frozen. They should be stored in moist sawdust or sand in a cold cellar, or buried in the ground outdoors during winter. Cherry scions are most safely carried through the winter when packed in moist leaves. If packed in sand or sawdust they sometimes become water-soaked.

"The principles" underlying grafting are the same as in building; that is, the scion and stock must be closely related. The work must be done in such a manner that the inside bark of both scion and stock come closely in contact, and at a season of the year and under such circumstances that they may unite at once, or as soon as the growth starts. The success of the operation largely depends (1) on having the stock and scion perfectly healthy; (2) in selecting the proper season, which varies somewhat with different plants; (3) in getting a perfect union of the inner barks of scion and stock at least on one side; (4) in making all the cuts with a sharp knife, that the parts in contact may have a smooth surface; (5) in doing the work rapidly, so that the surface may not be exposed.

"Grafting-wax" is generally used for covering the wounds made in grafting. A good grafting-wax is one that will not become too soft in summer, so as to melt and run down the stock, or so hard in winter as to crack and split off. A very reliable grafting-wax is made by melting together resin, four parts, by weight; beeswax, two parts; tallow, one part. When well melted pour into a pail of cold water, grease the hands slightly, and pull the wax until it is about the color of pulled molasses-candy. Make into balls, and store for use. This wax should be warmed when applied. If it is too hard, more tallow and less resin should be used. Some propagators use linseed-oil instead of tallow.

Clay is frequently used for covering wounds made by grafting, and it gives quite as good results as any of the waxes if properly applied. For this purpose some very tenacious clay should be used, and it is thought to be improved when mixed with about one third fresh cow-dung and a small quantity of plasterers' hair. The mass should be thoroughly worked over before using.

"Cleft-grafting" is a very common form of grafting, and is more universally known and used than any other. It is commonly performed to change the bearing of apple, plum and various other trees and plants. It is generally the most practical method to use on branches two or three inches in diameter, but it also works well on quite small stocks.

The tools used are a sharp, fine saw and a grafting-chisel.

Cleft-grafting is performed as follows: The place selected for the insertion of the scion should be where the grain of wood is straight. The stock is then cut "square" off with a sharp saw, and is split through its center with the grafting-chisel to a depth sufficient to allow the scion to be put in place. The cleft is held open by the chisel until the scion is cut and inserted, when the wedge is withdrawn, allowing the stock to close on the scion, and so hold it in place. If the stock does not spring back so as to hold the scion firmly it should be drawn tightly together with a string. The number of scions inserted will depend on the size of the stock. If the stock is not over three fourths of an inch in diameter, one scion is enough to insert, but on larger stocks two may be put in. All the cut surfaces, including the ends of the scions, should now be covered with wax. Apples and pears should be grafted just as the buds on the stock start into growth; plum and cherry just before growth starts.

Effect of Frost on Dormant Plants

There seems to be something peculiar in the effect of frost on plants. For instance, I have repeatedly tried to flower the Crimson Rambler rose in winter without resting it either by freezing or drying, and while it will grow vigorously through the winter it will not produce flowers. On the other hand, if kept in a cold cellar and rested by freezing or drying, and then brought into heat in January, it will produce a good crop of flowers. The same is true of apples. The common practice of nurserymen of keeping apple-trees in the cellar over winter often results in their not starting into growth until very late the next spring, and occasionally I have known trees kept in this way to not start at all until a year from the spring when they were set out.

Some experiments made in Paris a number of years ago showed that seeds from the north germinated quicker than those coming from the southern part of Europe, and that even cuttings of the white poplar from Norway started into growth quicker than cuttings from the same tree from Italy. This would seem to be partly due to the quickening due to the cold climate. It is well known that onions and some other plants are very difficult to keep in the dormant state after they have been frozen. The seeds of apples in my experience germinate to the best advantage when stratified and frozen during winter, although I know that they will grow fairly well without such treatment.

Inquiries Answered

Grafting Chestnuts.—G. P., Middleburg, N. Y. The Japanese chestnuts bud quite readily upon native chestnuts. I think it best, however, to graft them on small trees, say those not over six feet high. I have had best success when doing the work just as the buds began to swell, and I have generally used what is known as the whip-graft, but do not regard this as essential. You must not expect that you can graft chestnuts successfully if you have never had any experience, and the chances are that it will take you some little time to learn how to do the work successfully. You can undoubtedly obtain scions of the Japanese varieties from any of the Eastern nurserymen. I do not know what they will cost you, as the price is variable.

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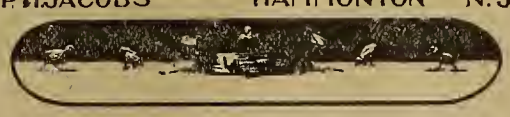

Room in the Poultry-house

THE majority of farmers put too many fowls together in one poultry-house. A house ten by ten feet square should not contain over a dozen large fowls or fifteen small ones. For one hundred hens a house sixteen by sixty feet and divided into two or three apartments will answer. If two apartments are used there will be fifty in a flock, the space being sixteen by thirty feet for fifty fowls. An excellent plan is a house sixteen by thirty-two feet, divided into two apartments, sixteen by sixteen feet each, with twenty-five hens in each apartment. The space gives ample room for scratching under shelter in winter. An extra shed for scratching will also be appreciated by the hens. It can be built at a small cost and will afford ample room. In summer the fowls can roost under the sheds. The yards should be about ten times the space of the houses, but the larger the better, and the deeper the houses and sheds—that is, depth to the rear, on the ground—the more comfortable the fowls. Each house can have a double yard, so as to change the fowls from one yard to the other. A yard in front and one in the rear is an excellent plan. Each house or shed may also have a window at the rear as well as at the front, if preferred. The best way to estimate how many hens to keep in a building is to multiply the width by the length and divide by ten. For instance, if a house is nine by sixteen feet, multiply the two figures together, making one hundred and forty-four square feet. Divide this by ten, and there is a fraction over fourteen. Do not put more than fifteen hens in such a house.

Effects of Crossing

Crossing the breeds has never given good results, although a great many try it, and will continue to do so. In nearly all cases when the attempt is made to blend the best qualities of two different breeds the offspring is not equal to either parent, hence in the course of a few years there will be no uniformity, and the stock reverts to the scrub. Too much mixing is no better than keeping scrubs. It is right and proper to grade up a common flock with pure breeds, but to cross two pure breeds is a mistake. Where crossing is practised largely, as with poultry, the result is nearly always a failure, there being no uniformity of color, size or laying qualities. Pure breeds are really the results of judicious crossings and selections, and cannot be improved upon except after years of care and selection of the best individuals. The best possible security, short of the actual test, that any bird or animal will produce its characteristics in its offspring is that these characteristics are known to have belonged to a long line of ancestors. Individual merit and adaptation to our needs should be the first and most important points of selection. The character of the ancestors should be considered. It is not necessary to endeavor to determine the character of any one of the ancestors, for when pure breeds are used one gets at once the results of selection for years by those who worked in the past. Crossing destroys the work that others have done before.

Feeding Meat

When feeding meat to hens do not use that portion which is fat. The object in feeding meat to hens is to supply them with nitrogen and not fat, as the grain contains all the fat and starch required for them. If the fat is fed it does not assist in any manner to provide material for eggs, but rather retards than assists laying. The cheap portions of beef, such as the neck, are better for fowls than the choicest fat and lean steaks. Blood is excellent for fowls, and can be easily fed to them by mixing it with their soft food. The ordinary ground meat contains both fat and lean, and sells for about three cents a pound; but as the meat is subjected to heavy pressure at a high temperature most of the fat is removed.

Home Markets

There is a time to market produce, which must be considered if success is hoped for. It is decidedly best to market as much produce as possible in the vicinity of one's home, and to sell directly to the consumer. In this way usually better prices are maintained, as there are no middlemen to get their share, and there is also the advantage of dealing with people whose standard is generally known. But even if lower prices must be taken, as a rule it is better to sell near home than to take the risk of marketing at a distance.

Points for Spring

Grain scattered among straw, to make the fowls exercise, will give good results. Variety cannot be objected to on the ground of expense, for meat is more economical than grain, while most farmers have pinched and broken grain that, if included, will be serviceable with a variety. Small potatoes, turnips and other materials that are unmarketable can be included. Milk can be given to the hens to be converted into eggs, and table scraps should go the same way. Broken glass or crockery should be cracked small and given them for grit. The coal-ashes may also be used for the hens as a dust-bath to keep them free from insects. What at present is thrown away as useless can be turned into profit by the hen. The question of whether the fowls should be confined or given the range depends upon circumstances, but good management must be given in both methods.

Fences for Ducks

The large breeds of ducks can be confined in yards having fences only two feet high. Such fences may be movable, so as to change the ducks to a new location. Some breeders grow oats in one yard while the ducks are occupying the other, in order to provide green food. Rape, lettuce, sweet-corn, mustard, peas or any kind of green food will answer, as the ducks can be allowed on the plot when the plants are but two or three inches high.

Correspondence

EXCELLENT RECORD FOR DUCKS.—In the year 1901 I collected from thirteen puddle-ducks from February 15th until August 15th one thousand and thirty-three eggs. MRS. C. S. E.
Barber, Talbot County, Md.

Inquiries Answered

Plymouth Rocks.—H. T. V., Monroeville, Pa., writes: "Has the rose-comb Plymouth Rock a white ear-lobe?"

ANSWER:—We doubt if there is a recognized rose-comb variety. All Plymouth Rocks should have red ear-lobes.

Sex of Geese.—H. A. S., Eldorado, Ohio, writes: "Please inform me how to distinguish the sex of geese."

ANSWER:—The gander has a thicker neck and more masculine appearance. The female has a loud, harsh voice, while that of the male is fine and somewhat squeaky.

Ailment of Ducks.—S. M., Quinlin, Okla., writes: "My ducks have large crops and are weak in the legs. Please give a remedy."

ANSWER:—It is probably indigestion, due to overfeeding and unsuitable food. Usually when ducks have weak legs they are very fat. Give no food for twenty-four hours, then feed soft food; a mixture of ground oats, two parts, and animal-meal, one part, mixed with cooked potatoes or turnips twice a day will be found excellent.

Feeding Sulphur.—S. H., Greenfield, Iowa, writes: "Can you inform me if it would affect the health of chickens to feed them sulphur every day? I have heard that it would keep lice off of poultry."

ANSWER:—It would not be advisable to feed sulphur daily, as its physiological effects may be injurious. If given once a week, about one teaspoonful in the food of a dozen fowls, it will do no harm and may be beneficial. Nearly all foods contain a proportion of sulphur in some form.

Young Turkeys.—"Subscriber" writes: "What is the best food for young turkeys; also the best mode of destroying the large lice on them?"

ANSWER:—Feed at least four times a day, giving stale bread dipped in fresh milk, varying the food with hard-boiled eggs, onion-tops and lettuce (finely chopped), allowing cracked corn, wheat and millet-seed as soon as they will accept such. For the large lice anoint the head with a drop of melted lard, well rubbed on.

Picking Ducks.—B. E. writes: "1. How many times can ducks be picked in a year? 2. Does it help eggs to hatch by moistening them? 3. What is the best remedy for gapes?"

ANSWER:—1. Ducks may be picked as often as the feathers are "ripe," that is, as soon as they begin to come out or can be removed easily. 2. Not unless the eggs are subject to excessive dryness; as a rule it is unnecessary. 3. Keep chicks in clean places and give one or two drops of spirit of turpentine on a bread-crumb. Using the horsehair method requires experience.

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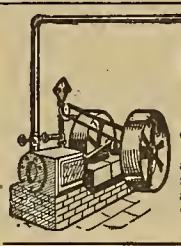

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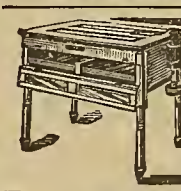

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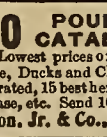

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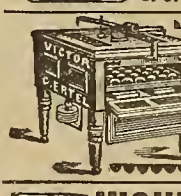

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VETERINARY

CONDUCTED BY DR. H. J. DETMERS

To regular subscribers of the FARM AND FIRESIDE answers will be given through these columns free of charge. Where an immediate reply by mail is desired the applicant should inclose a fee of one dollar, otherwise no attention will be paid to such a request. Inquiries should always contain the writer's full address. Queries must be received at least TWO WEEKS before the date of the issue in which the answer is expected. Veterinary queries should be sent directly to DR. H. J. DETMERS, 1315 Neil Avenue, Columbus, Ohio.

NOTE.—Parties who desire an answer to their inquiries in this column must give their name and address, not necessarily for publication, but for other good reasons. Anonymous inquiries are not answered.

Lame.—M. F., Centerville, R. I. In your inquiry you do not say anything about the peculiarities of the lameness except that it is in the left fore leg, consequently I can only advise you to have the horse examined by a veterinarian.

Sorghum as Food for Horses.—J. O. S. Mature, or nearly mature, sugar-cane and sorghum contain more woody fiber (cellulose) than horses are able to digest; consequently they will prove to be a dangerous food, and that the more so the coarser and the more nearly ripe they are.

Sick Only a Few Minutes.—I. B. D., Fort Ann, N. Y. I cannot possibly tell you what caused the death of your horse, because all you say is that he was sick only three or four minutes. If you had had a post-mortem examination made very likely the cause of death would have come to light.

Warts.—A. D., Aurora, Ill. If the wart on the end of a teat of your cow has a neck it is best removed by means of a ligature drawn as tightly as possible around the neck, and as closely to the teat as can be done. If it is without a neck it can be removed by caustics. Perform the operation when the cow is dry.

Degenerated Hoof.—R. G., Valentine, Neb. According to what you say, the possibility of any permanent improvement appears to be very doubtful, although it may be that your horseshoer will be able to effect some temporary improvement by judicious paring and shoeing. At any rate, your description is too brief and too superficial to base upon it a clear idea of the real condition of the foot and of the extent and gravity of the injury done to the horn-producing parts.

Probably Injured When in Heat.—S. M. T., Cuhrun, Ky. Your cow, it seems, was injured, probably in the spinal column, by other cows jumping on her when she was in heat, and if so, a recovery may not be impossible if the cow is kept very quiet and away from all other cattle when again in heat, but it must be regarded as very doubtful. Whether or not anything can be done to improve her present condition can only be ascertained by a careful examination by a competent veterinarian.

Bitter Milk—Soaked Barley.—E. C. W. McD., Aptos, Cal. Since the milk of your cow gets bitter not until twenty-four to thirty-six hours after it has been drawn from the cow, there can be no doubt that the milk becomes infected in the premises in which it is kept after milking. If this is a cellar in which also fruit and vegetables are stored the explanation is very easy, not only how the milk gets bitter, but also why it always occurs at a certain season. Of course, I do not know how you are situated, but I am sure you will have no more trouble if you can manage it to have a small cellar exclusively for milk and butter.—Soaked barley and bran, though not a bad food for horses if enough good hay is fed at the same time, is equal to good oats, and would be improved if some shelled corn were added.

Injured Leg.—D. M. S., South Auburn, Neb. From what you say it must be inferred that the healing of the wounded tendon is not yet perfect, or at least not yet sufficiently firm and solid, so that when the mare was used to draw a buggy the tendon became strained, or some of the not yet firmly united fibers became severed again. I would, therefore, advise you to give the animal perfect rest until all lameness has disappeared; to keep the swelled part of the leg, but particularly the more or less horny scar, as clean as possible; and if there should yet be an external sore to dress it twice a day with a little iodoform, or if there should be an open crack in the horny scar to apply twice a day a little of a mixture composed of one part of liquid subacetate of lead and three parts of olive-oil until a healing has been effected.

Indications of Pregnancy in a Cow.—C. G., Sebastopol, Cal. As the first indications of a cow being with calf, which, however, are not always reliable, are considered: Not coming in heat again after having been served; an increased appetite without any corresponding increase in the yield of milk; a quieter behavior and avoiding with more care the butting of other cattle, but particularly the approach of a bull, and a gradual decrease in the yield of milk, beginning about six months after service. It is also claimed that the milk of a cow with calf is richer in cream than of one that is not. If a cow is with calf, and has been over five months, the milker will often, but not always, be able to feel the motions of the calf by leaning with the head at the side of the cow while milking. The same motions may also be felt, and sometimes even be seen, immediately after the cow, especially in the morning, has been drinking a bucketful of cold water. Still absolute certainty can only be obtained by a local examination.

Fistulous Withers.—J. H. D., Madison Run, Va. What you describe was at first probably nothing but a simple bruise, and probably the swelling would have disappeared in a short time and nothing further would have happened if you had at once made persistent applications of cold water and had not resorted to such an heroic, exceedingly irritating and destructive treatment as you applied. As it is now it is a very serious case of fistulous withers, which never can be brought to healing without a surgical operation, performed by a competent veterinarian, and consisting either in making lower openings through which every part of the fistulous canals can be thoroughly drained, or in splitting open the latter. After this has been done, caustics may be used to destroy the callous walls and unhealthy granulations of these canals. Since the operation has to be performed by a veterinarian it will save you much time, disappointment and probably money if you also leave the further treatment to the veterinarian who performs the operation.

Garget.—D. T., Farmingdale, Ill. What you describe is an old case of garget. The three quarters of the udder of your cow, being dry and hard, are past recovery. They will probably never again produce any milk. The fourth quarter, out of which you can draw some pus (perhaps clots) and a watery substance, will very likely be also permanently disabled. If what you are able to milk out is really pus, an abscess will be found existing in the interior of that quarter, which, in order to save the life of the cow, may have to be opened, either by splitting open the upper end of the teat or by cutting off the latter altogether, so as to make it possible to remove the pus and to disinfect the interior of the abscess by making injections with a one-per-cent solution of either creolin or carbolic acid in clean water. If it is not pus, but clots, the latter may be removed through the teat by vigorous and persistent milking. If the cow is feverish and otherwise very sick it may be concluded that blood-poisoning has already taken place. A competent veterinarian should be consulted, although any general treatment, however, may not now be able to save her life.

Mange of Cattle.—L. L., Plains, Kan. Mange of cattle, or itch, as you call it, is a comparatively rare disease, but since you say that your cattle have it every fall you may be mistaken. It may be that the itching is simply caused by the presence of lice. If so, either have your cattle washed with a good tobacco decoction, or first with soap and warm water, and then before they are perfectly dry with a five-per-cent solution of creolin in water. The washings must be thorough, so as to bring the wash everywhere in contact with the skin. They are best applied with a good stiff brush, and may have to be repeated in about five days. But the washings will be in vain unless at each washing the premises in which the cattle are kept are also at once thoroughly cleaned and disinfected, for if this is not done a reinfection is sure to take place. Mange can also be cured by the same treatment, but still greater pains have to be taken to do everything in the most thorough manner, because the mange-mites are more hidden, and therefore better protected, than the much larger and more exposed lice. If the disease proves to be mange it may be best to inform your state veterinarian.

Weak in Hind Legs.—O. H. T., Palouse, Wash. Weakness, or paralysis, in the hind quarters of swine may be produced by quite a number of different causes, repeatedly stated in these columns. The treatment in all cases requires the removal of the cause that is, and has been, acting in the case in question. Where this can be, and is, done a cure is possible, and will be effected, provided the degeneration already produced in the tissues (muscles in particular) is not such that it will not any more admit a restoration to a normal condition. Where it is, or where the causes cannot be removed, a recovery is out of the question. As your communication does not contain anything pointing toward the most probable cause I cannot give you any definite directions, and only say that probably the most frequent cause consists in a defective diet—in providing only such food as is too poor in nitrogenous compounds, lime, salts and phosphates, or too rich in acids—and insufficient exercise. If it were a little later in the season a good clover-pasture would be of much benefit, provided the weakness, or paralysis, is not so complete as to make it impossible for the animal to move about.

Dropsical Effusions.—W. J. P., Society Hill, S. C. An accumulation of blood-serum in the subcutaneous tissues on the lower parts of the legs, under the chest and abdominal cavity, between the lower jaws, in the sheath, etc., may have various causes, but in all cases some irregularity in the circulation of the blood is existing in some part of the body. Particularly in sheep such dropsical effusions beneath the skin very often present themselves as the secondary morbid changes in so-called cachectic diseases, especially in liver diseases, causing an interference with the circulation of the blood. As to your special case it appears from your description that the skin of your mule does not perform its functions, and that the kidneys, or urinary organs, are overburdened and apparently not able to perform in addition to their own all the functions that should be, but are not, performed by the skin, and perhaps by the respiratory organs. Still your communication concerning the latter is silent. Therefore, if the respiratory organs are healthy and able to perform their functions, it is very plain that the object of the treatment must be to excite the skin to greater activity by frequent and thorough grooming, rubbing the extremities and the swellings with spirit of camphor, and by giving the animal all the muscular exercise the same is willing to take. Concerning the food, I would advise you to feed oats instead of corn, avoiding any food of relaxing tendencies and of a sloppy character.

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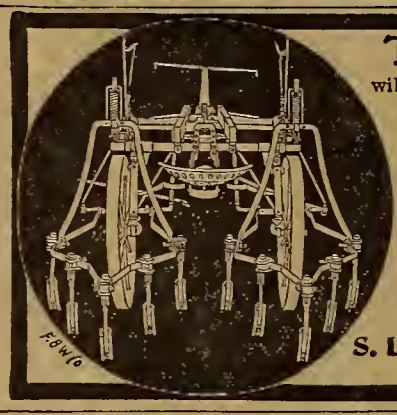

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Do not fail to read about the great crop-growing contests described on Page 23 of this number of the Farm and Fireside.

THE GRANGE

Conducted by Mrs. Mary F. Lee, New Plymouth, Ohio

Religion, morality and knowledge being necessary to good government and the happiness of mankind, schools and the means of education shall be forever encouraged.—Dr. Manasseh Cutler.

Current Comment

The Timeliness of Co-operative Insurance So far 1902 is a record-breaker in fire-losses. The average loss for each day of the year to February 13th was about seven hundred and twenty-five thousand dollars. The losses to insurance companies is correspondingly large. The murmuring among the underwriters, faintly heard as the fire-losses gradually increased year by year, has grown to an ominous growl. Some have found the business unprofitable, and quit. Most of the larger insurance companies met in New York two weeks ago, and decided to raise the premium on the most hazardous risks twenty-five per cent. An advance on all property was made.

Farmers will not take kindly to an increased rate. They feel it quite a heavy tax on their income. Many feel that they are paying for the losses in the city, which are large. If it is true, as charged by the insurance companies, that a large per cent of the fires are avoidable: that they are due to indifference, faulty construction of buildings, negligence of property-owners and employees, inefficient and dishonest inspection; to the practice of burning out when times are dull, on the principle that it is more profitable to burn out and collect insurance than to maintain an idle plant, then will farmers generally revolt against paying for the losses so incurred. It is a significant fact that the loss by fire in the country is larger in summer than in winter. This indicates that the majority of fires in the country are due to lightning. The loss last season by such cause was greater than in many years, because of the frequency of electrical storms, yet the farmers who were insured in the grange mutual insurance companies paid smaller assessments than would be the premium in the old-line companies.

Farmers are finding mutual insurance safe and profitable. While we are not afflicted with the jingo notion that the farmer as an individual is more honest than any other individual business man engaged in honorable business, yet under the rules of grange mutual fire insurance companies a property-owner to secure insurance must first be eligible to membership in the grange. The underwriting is done by a local agent, elected by the grange. Thus the whole matter comes directly under the knowledge and supervision of the subordinate grange. As each one named is a member of the company that will have to pay the loss, there will be little incentive to dishonest fires. In Ohio and other states one of the greatest inducements to those who are not open to the social and educational influences to enter into the grange is the opportunity of securing safe insurance at a minimum of cost. Investigate the insurance regulations of your state, and find where the profit lies.

An Attractive Program We are indebted to Brother George B. Lake, lecturer of Pembroke Grange, N. H., for an attractive and well-planned program for 1902. The programs are varied. Those of early spring and of autumn and winter have questions for discussion that will tax the best thought, while those of summer are in a lighter vein, and consist largely of music, recitations, degree-work and questions that are likely to stimulate interest, but not tax too heavily the mental powers. One of these is "Resolved, that a lazy person takes the most comfort." Another, "What is the most advantageous manner of spending a vacation?"

June 7th is set aside for the entertainment of all the school-children within the jurisdiction of Pembroke Grange. Exercises are to be held in the town hall, which is the meeting-place of the grange, at 2 P. M., in charge of F. H. Benedict, Superintendent of Town Schools. After literary exercises the school-children will be tendered a banquet. The public is invited to attend.

The latter feature is certainly a commendable one. It serves to cement the bond of union between the grange and the school. We hope that Brother Lake will send us a report of this meeting. It is just such work as this in which granges all over our land are interested.

The Glucose-Starch Combine The glucose-starch combine is of paramount interest to farmers, inasmuch as corn is the principal factor. When the commercial world heard the rumor of the proposed combination of the glucose and starch industries it wagged its head wisely, saying, "It is a most fitting and proper union." It was not a difficult matter to consolidate the two great trusts, as both were well organized before going into this gigantic corporation. The capital stock is placed at eighty million dollars. The working capital will be five million dollars. When it is realized that these combined interests use up annually over sixty-five million bushels of corn one can readily realize what a factor in price-making on corn the new company will become. One man can do the buying for the concern, thus becoming the greatest single corn-purchaser in the world. A difference of one cent a bushel means sixty-five thousand dollars to the trust; of ten cents, six hundred and fifty thousand dollars. Whether corn is twenty-five cents or fifty cents a bushel will be a matter of considerable interest to the combine.

This combine will likely prove the greatest incentive of recent years to the farmers of the West to combine their interests as a matter of self-preservation.

Trust Wisdom The recent action of the United States Steel Corporation in refusing, after gaining a practical control of the ore-fields of the country, and of the railway transportation, besides controlling many of the lake and ocean freight-bearing vessels, to raise the price of steel products is certainly a wise one. Whether it was done to influence public opinion, and thereby Congress, to look favorably on the ship-subsidy scheme, or marks the permanent policy of the company, is beyond the ken of all save those immediately concerned. The corporation gives as a reason for not advancing prices that the capital stock of the company is yielding a good income, and that to increase prices only invites competition and arouses adverse public opinion. Both of which are disastrous to their business. That it is good business policy to be friendly with the public, who are the customers, all will admit. Whether the public is satisfied with the present prices, and whether it is safe to trust without restrictions the power of price-making to such a powerful combine, are questions that naturally arise. Certain it is that the policy is a wise one, and wise indeed are the farmers who will organize for the purpose of maintaining lucrative prices on their products. The steel combine declares that it is not reducing the output, but is keeping its furnaces and factories going night and day to supply the demand at present prices.

Daily Growth Each day converse with some master-mind. Let not the sun go down till you can say, "I have this day spoken with a rare and glorious spirit." We have "talked as the gods talk, with Jove nodding to Jove behind the chair of each."

Come to the master, humbly, inquiringly, reverently. He is the revealer to you of the divinities of life. Be sure he will answer your fondest questionings, and instil yet others for the morrow. Believe that the questions propounded will find full and abundant answers, if not to-day, then when you are prepared to receive the message. Thus will you gladly welcome the dawn, because it will ever bring new satisfaction, new spiritual perception. Thus will you grow in strength and power, and your daily walk will be heroic and sublime.

The Naming of the Grange

To secure a name that is appropriate and descriptive, and yet not offend the sensitive ear, is not the least of the perplexities that confront the originators of a new society. The name of our order, Patrons of Husbandry, is so apt and appropriate, and withal so pleasing to the ear, that we accept it as fit, and seldom question its origin. The New York State Grange "Bulletin" has had access to a lot of correspondence, and prints the following history of the naming of the grange. We give a little shudder when we realize how near we came to being dubbed "Knights" throughout our long and eventful career. The name has been overworked. Any society could use it. Not so Patrons of Husbandry.

"While the order of Patrons of Husbandry was in an embryonic state it was constantly spoken of as the 'lodge.' Its first body was denominated 'United States Lodge.'

"Meanwhile letters were going back and forth between the founders respecting a permanent name. Anson Bartlett wrote from North Madison, Ohio, September 15, 1867, to O. H. Kelley, Washington, 'Would it not be better to drop the name "lodges" and give the organized bodies of the order some name derived from, or applied to, the cultivation of the soil? The farm, the garden or the vineyard would be more appropriate. "Work in the Vineyard," "Work in the Garden," instead of "Work in the Lodge." In regard to a name for the order I would have it significant and suggestive of our calling. How would "Independent Farmers" do?'

"To which Brother Kelley replied, 'As to the name "lodges" it is conceded this is not appropriate, and each of us has suggested names—"Fields," "Farms," "Beehives," "Gardens," etc. I presume fifty have been suggested. "Independent Order of Progressive Farmers" was one, "Knights of the Plow," "Knights of the Sickle," "Knights of the Flail." "Independent Farmers" is a good name.'

"Then there came a letter from William Muir to Mr. Kelley on October 7, 1867, saying, 'As to the name nothing can be so beautiful, simple, expressive or appropriate as "Sons of the Soil." In place of "lodge" have "garden," "grove," "arbor" or simple "home."'

"October 15, 1867, Brother Kelley wrote Brother Anson Bartlett, 'The name of the order is yet a stumbling-block. It will turn up before long. Here we have thonght advisable to adopt the name of "temples" for the halls, the grand head to be known as the "National Temple."'

"November 1, 1867, he wrote again, 'The name of "League of Husbandry" has been suggested as a name for the order. If any original name in the place of "league" could be substituted it would be better. "Husbandry" comprises the work nicely, according to Webster.'

"November 4, 1867, there is the following to Mr. Bartlett by Brother Kelley, 'How would it do to call the "lodges" "granges?" For instance, "Blue Fly Grange of the League of Husbandry?" "Grange" and "husbandry" being used according to Webster's Unabridged.' To which Brother Bartlett replied November 6, 1867, 'How would "Patrons of Industry" be? I almost fancy it to be good. I believe it is original at any rate.'

"On receipt of this letter Mr. Kelley substituted the word 'husbandry' for the word 'industry,' and at a meeting called by previous notice on November 15, 1867, at 4 P. M., and at the office of William Sanders, the order of 'Patrons of Husbandry,' with its vast possibilities, was christened and launched upon the American world."

The "Good-old-times" Farmer

The American of the Revolutionary period was an extremely poor farmer. Looking back on his methods and his work it is hard to say which were the most crude, his implements or his ideas.

He used a wooden plow; he was afraid an iron one would "poison the soil."

He had not yet learned that glanders was contagious, and would work and stable healthy stock alongside of stock affected by it, and wondered what there was in the soil, air or climate that carried them off.

He didn't understand the use of fertilizers, and instead of spreading his barn-yard manure on his fields he let it accumulate around his barn until the approaches were impassable. Then he dug the barn out and moved it.

Instead of rotating crops to save his soil he planted according to the phases of the moon.

In Virginia the belief prevailed that it would kill cows to house and milk them in the winter.

Transportation was poor, and continued so for a long time. The roads could not have been worse. Markets were scattered and far between.

Each farm attempted to be self-sustaining in as large a degree as possible. What the farmer couldn't grow or his wife couldn't make they went without.

Wasteful methods of tillage eventually exhausted a soil originally rich, and in the reign of Andrew Jackson agriculture had fallen into such an alarming state of neglect and inefficiency that the government had to come to its relief.—Ainslee's.

—Those who are really happy are usually those who are really good. The bad, wicked and vile can never feel the fullness of joy that comes to gladden the heart of the well-doer. To be good is to live temperately, industriously and honestly, and to be always learning something new and useful. All who do these things will find the true secret of happiness.—Elmina.

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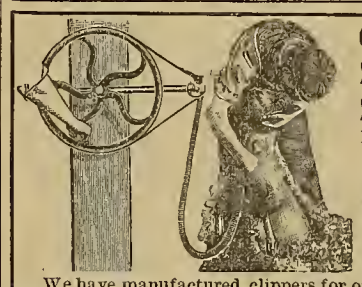
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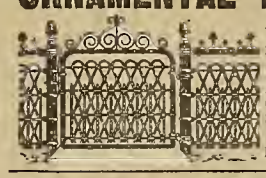
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THEIR COMPANY

BY MABEL L. STANTON

"DON'T forget the syrup-jug, pa," called Millie to her father, hitching up his team. "We're going to have that candy-pulling to-night, you know, and all the young folks will be over."

"Third time it's been emptied inside two weeks. I should think it ought to be sweetnin' enough to last awhile," Hiram Plover remarked to himself, as he cut a piece of surplus rope off a dangling end of the clothes-line and put it in place of a worn-out strap in the harness. Mr. Plover drove off without the jug. Millie gasped in astonishment at this unheard-of proceeding.

"Did you ever! Pa's gone off, and we haven't got any syrup for to-night!"

"Well, I declare!" his wife remarked, as she lifted the sizzling, fragrant, crisp, brown fried cakes from the kettle of hot lard. "Wonder what's come over him?"

"Don't know, I'm sure," answered Millie. "He's been awful sober all the morning."

"Just like Uncle Josiah was," said Cousin Ellen, from the biggest arm-chair with the feather-cushion. "Guess you'll have to borry some molasses for your candy to-night, won't you, Millie?"

"S'pose so," said Millie, as she stood looking into the distance. Her plump arms were so crossed that each hand covered a hole in the elbow of her faded brown dress.

"How long's Cousin Ellen been here?" suddenly asked Hiram Plover that evening, while the young folks were off in the kitchen pulling candy, with Cousin Ellen helping them.

"Why, I don't know; quite a spell anyway," answered his wife.

"'Bout six months, ain't it?" he asked.

"Guess so. Why, what you got agin Cousin Ellen?"

"Oh, nothin'. She's good company enough if one hasn't nothin' to do but sit and gabble and gobble. Give anybody the best feather-bed in the house, the best chair, the best cookin' an' an extra fire an' they ought to be good-natured at least. That boy Jacky of hern eats as much as two grown persons."

"Ain't you ashamed," said his wife.

"Well, mebbe I be, an' then mebbe I ain't," he replied.

"Cousin Ellen ain't got no home in particker," said his wife.

"She might have one," responded her husband. "She's got a home of her own, an' could get along if she'd a mind to. We won't have any home of our own if we don't look out. Want to live 'round on your relations, huh?"

"Don't know as I do; what's the matter anyway, pa? I never heard you talk so before."

"Well, I was thinkin' mebbe we'd better try an' economize awhile, company or no company."

"I didn't know we'd been very extravagant, pa. We ain't had many clothes, pianners, an' jewelry an' such things."

"That's so. There ain't no paint on the house, neither; the fence needs fixin' up; the barn leaks, an' there's that interest comin' due the first of May. Crops was short last year, an' its goin' to be mighty hard pullin' to get the interest to pay Fuller. Fact is," lowering his voice, "we've had so many relations 'round an' so much company we've et up everythin' fast as it come in. They've got into the way of comin' two an' three at a time, or more, an' stayin' quite a spell—have for years back. Course I like company as well as you do. I like to see the young folks enjoy themselves, but it 'pears like it's been kept up so stiddy that we'll have to do somethin' or get left in the hole. There's Jim and Cynthy. I thought mebbe they'd be housekeepin' 'fore now. Course we asked 'em to stay awhile, an' they're welcome, but they don't seem to say nothin' about havin' a home of their own yet, an' they've been married nigh onto a year now. Jim's a real nice pleasant feller and a good hand to chore 'round, but he seems to have kinder settled down, contented like. There's little lame Nell, course she ain't got no home but this, an' I intend she shall share with us long's we've got a crust ourselves. She's as good a child as ever breathed, too. Mattie, don't think I grudge what your father an' mother had from us while they was livin', an' my father an' mother, too. It's our duty to look after the old folks. They took care of us when we was little an' helpless."

"That's so, pa," responded Mrs. Plover.

"I hain't quite forgot the verse, neither, 'bout entertainin' 'strangers an' angels unawares.' Like as not we've entertained a few of them—that is, angels, I mean, though it ain't developed yet about that.'" He paused, then continued, "The young chickens that would have laid this spring is mostly et up, on 'count of company, an' most the apples, too. The honey's about gone, too, I see. We don't have butter an' eggs enough to get our groceries with."

"It takes lots of cream for so many of us, pa, so there ain't much left for butter; an' the way the butter we do have goes off is a caution."

"How'd it do to try a little plainer livin' for a while, Mattie?" mildly suggested Mr. Plover, watching for the effect.

"Think my cookin's too good, pa?"

"You know, Mattie, I think you're the best cook in the whole country." Then he further ventured, "I s'pose chicken pies, chicken fried, cakes an' pies an' such things take more butter an' eggs an' cream an' sugar than brown bread, pork an' beans, corned beef, codfish, johnny-cake, an' such like?"

"Land, I guess they do, pa."

Encouraged, he continued, "We'd be just as healthy an' it wouldn't cost quite so much?"

"Why, certainly, pa; but then company expects better livin'."

"Our company ain't much better than we be, air they?"

"I guess not, pa."

"Well, now, Mattie, that interest ought to be paid, an' I don't see how I can do it unless you an' the rest help."

"I'm willin' to do what I can, pa; but ain't there anythin' to turn off?"

"Why, there ain't much more wheat to sell. We must save some for seed, an' it takes a good deal for our fine flour the year 'round, with so much company an' all. I don't know yet whether we can spare any more potatoes. Course there's some timber we can get out if the boys would take hold and help real good."

"There's father's washin'-machines that has cost quite a bit, first an' last for lumber an' zinc an' so on. Course it gives him employment. Then there was the patent he got. That cost extra. Course he ain't made nothin' out of 'em yet. We've got quite a number of the machines in various stages standin' round. I use them for feed an' shelled corn an' one thing an' another. He'd like to make up a lot of 'em by machinery—it's rather tedjus makin' 'em by hand—but I ain't got the means for that now. I don't know but it's a vallyble idea, but it takes money to work it out."

"Them that's tried his machines thinks they're all right," responded his wife.

"Tell you what, Mattie, this interest business counts up like thunder. Here we've been payin' out interest-money fifteen years, an' nothin' paid on the thousand dollars yet. We owe it just the same as we did in the first place. John Hanberg told me the other day he'd been payin' interest-money for the last ten years on fifteen dollars he borrowed of one of these here chattel-loan fellers. He's paid him a dollar an' a half a month right straight along; that makes eighteen dollars a year, you see. More money than he'd borried in the first place, an' in ten years, he's figgered, he's paid out a hundred an' eighty dollars interest, an' still owes the first fifteen dollars."

"Hiram Plover, you don't say so!"

"By jingo, it's a fact! Told me so himself; wouldn't have no object in lyin' that I know of!"

"How come he to borry the money, pa?"

"Well, he had a doctor-bill that had run along fer quite a spell, an' he couldn't seem to spare the money to pay the doctor, so one day he borried it an' give a chattel mortgage on his furniture."

"Sho, that's too bad. He'd ought to pay it up and put an end to that interest business," his wife responded.

"Yes, that's so! That's a fact!" said Mr. Plover.

This last item stuck in good Mrs. Plover's mind. It revolved and revolved and still stuck there. It was noticed that generous, whole-hearted Mrs. Plover, with not a stingy hair in her head, was getting saving. How much of a sacrifice it was to her no one but herself really knew. She seemed anxious to make and sell all the butter possible. She counted the eggs, too, and was careful that things should not be wasted.

"Is there any use of our keepin' five dogs, pa?" she asked abruptly one day.

"Not that I know of," he answered, chuckling to himself. "We need one, I s'pose." He afterward heard her tell Tom and Dick, "You'll either have to give away or do somethin' with four of those dogs. It takes a lot to feed 'em, an' they're no earthly good except to lie around an' eat an' bark at folks that don't need harkin' at."

"Guess I'll be a teacher, ma," said Millie one night after school. "Teacher was sick to-day, and she had me hear some of the classes, and she said I did first rate."

"You're pretty good in your studies, aren't you, Millie?" asked her mother.

"She's the best scholar in school, ma," answered Tom.

"That makes me think of somethin' I heard over to the Center to-day," remarked Mr. Plover.

"What is it, pa?" asked his wife, while the others looked the question.

"Why, I heard Mr. Jenks inquirin' 'bout a girl to work at his house fer her board an' go to school. He's goin' to be away most of the time, an' his wife wants some one to stay with her nights an' help 'bout the work."

"Did he get any one, pa?" asked Millie quickly.

"Guess not," answered her father.

"Did you say anything about me, pa?"

"No, didn't know as you would want to do it; but mebbe it would be a good thing fer you if you didn't have to work too hard. If you want to try it, of course it will be just as you an' your mother can agree. Mrs. Jenks is a real nice housekeeper, they say, an' you can likely learn somethin' there that'll be useful to you."

Millie secured the place, and for some days Mrs. Plover busied herself in getting her things in readiness.

Jim soon after rented a farm on shares, and he and Cynthy moved into a vacant house on the place.

Cousin Ellen seemed to be getting a little restless, and finally one bright day she remarked, "I've been visitin' quite a spell now, and I b'lieve I'll go to housekeepin' again."

There were reasons and reasons why Cousin Ellen had gone visiting. For one thing, the kitchen stove smoked, and it wasn't very pleasant to get up in the morning and cook mush and pancakes on a smoky stove. She didn't like to cook very well anyway, and she and Jacky got tired of eating cold pancakes and cold mush the rest of the time. Then she was tired of sweeping and washing dishes and making beds. She always bruised her knuckles and hurt her fingers every time she tried to do anything. The window-curtains needed doing up, and the windows needed cleaning, and she was tired of keeping the shades down to hide them. Then, too, the outside kitchen door stuck in places, and she always had to set anything down before she could get the door open. Besides, she wanted a change; she wanted more time to knit lace, rest, and be comfortable. So she had been visiting among her relations for over five years. Before she went away from the Plovers she asked her cousin Mattie what she would do with a stove that smoked every time there was a fire in it.

"Why," she replied, "we generally clean ours out all through—underneath the oven an' reservoy, an' the top of the stove, pipe, chimney an' all."

"Well, I b'lieve I'll try it," replied Cousin Ellen, "for I do hate to have a stove smoke like sin all the time I'm cookin' anything."

* * * * * * * * * *

"We're comin' out fine this year, Mattie," said Hiram Plover a year later. "Our all helpin' counts, I tell you. Tom, Dick an' I got out a good bit of timber last winter for ties, staves an' hoop-poles. We've had more stuff to turn out than usual, too. I've got the interest-money all ready for Fuller, an' we can pay a good slice on the principal, too. Millie's teachin's a big help. Then your butter an' eggs an' poultry has helped a big lot. The turkeys, ducks an' geese you sold brought a good bit."

"Little Nell helped lots, pa, about takin' care of the poultry," his wife answered, turning affectionately toward the child.

"Oh, I love to feed them, Auntie," said sweet-faced, gentle-voiced little Nell. "There isn't much else you will let me do," she added, apologetically.

Hiram Plover continued, "I seen Mr. Jenks over to town to-day, an' he says he's goin' to look into that washin'-machine business of father's, an' if it's all right mebbe he can arrange things to go in with him, so that both of them can make somethin' out of it. You can't guess what I heard to-day, ma?"

"What is it, pa?"

"Well, I heard that Jacob Greeley was sparkin' Cousin Ellen."

"For the lan's sake! Who is he?"

"Why, don't you remember that tall, slim feller, limped a little—got a wooden leg, they say—one eye a bit cross-grained, that stopped here to dinner with Jim's brother one day about a year ago?"

"Ye-es; b'lieve I do."

"Well, he's the one. Been a widower the last six months. They say he likes to cook an' potter 'round the house awful well. Course he ain't much else to do but to draw a pension, an' he likes Cousin Ellen 'count of her sociability, they say."

"I declare to goodness! Well, they both ought to be suited, then."

Jean Valjean and the Bishop

(Jean Valjean, the released galley-slave, hideous and desperate, appears at the door of Monseigneur Welcome, the bishop, begging for food.)

"Madame Magloire," said the bishop, "you will lay another knife and fork."

The man advanced three paces. "Wait a minute! . . . Did you not hear me say that I was a galley-slave, a convict?"

"Madame Magloire," said the bishop, "you will put clean sheets on the bed in the alcove. . . . Sit down and warm yourself, sir. We shall sup directly, and your bed will be got ready while we are supping."

Madame Magloire came in bringing a silver spoon and fork, which she placed upon the table.

"Madame Magloire," said the bishop, "lay them as near as you can to the fire;" and turning to his guest, he said, "The night breeze is sharp on the Alps, and you must be cold, sir."

After bidding his sister good-night Monseigneur Welcome took up one of the silver candlesticks, handed the other to his guest, and said, "I will lead you to your room, sir."

The man followed him. In order to reach the oratory where the alcove was it was necessary to pass through the bishop's bedroom. At the moment when he went through this room Madame Magloire was putting the plate in the cupboard over the bedhead.

* * * * * * * * * *

Next morning at sunrise Monseigneur Welcome was walking about the garden, when Madame Magloire came running toward him in a state of great alarm. . . . "Monseigneur, the man has gone! The plate is stolen!"

The bishop remained silent for a minute, then raised his earnest eyes, and said, gently, to Madame Magloire, "By the way, was that plate ours? . . . I had wrongfully held back this silver, which belonged to the poor. Who was this person? Evidently a poor man."

A few minutes later he was breakfasting at the same table at which Jean Valjean sat on the previous evening. . . . There was a knock at the door, and a strange and violent group appeared on the threshold. Three men were holding a fourth by the collar. The three were gendarmes, the fourth was Jean Valjean.

Monseigneur Welcome advanced as rapidly as his great age permitted.

"Ah! there you are," he said, looking at Jean Valjean. "I am glad to see you. Why, I gave you the candlesticks, too, which are also of silver, and will fetch you two hundred francs. Why did you not take them away with the plate?"

"Monseigneur," the corporal said, "what the man told us was true, then? In that case we can let him go?"

"Of course," the bishop answered. . . . "My friend," he continued, "before you go, take your candlesticks." He went to the mantelpiece, fetched the two candlesticks and handed them to Jean Valjean. . . . Then, turning to the gendarmes, he said, "Gentlemen, you can retire."

They did so. Jean Valjean looked as if he were on the point of fainting; the bishop walked up to him, and said, in a loud voice, "Never forget that you have promised me to employ this money in becoming an honest man."—From Les Miserables.

Bad Roads Did It

BY HARRY ELLARD

A farmer old, so we have been told,
With a team of horses strong,
Drove down the road with a heavy load
While singing a merry song.
But his mirth in song was not very long,
For his horses gave a leap;
As he ran amuck, in the mud he stuck,
Clear up to his axles deep.
Bad roads did it.

And a wheelman gay went out one day
For a joyful, merry spin;
With the weather bright his heart felt light
As he left the country inn.
But he went not far, when he felt a jar,
Which started his troubles and cares;
He was laid up ill, and the doctor's bill
Came in with the one for repairs.
Bad roads did it.

In an automobile, of wood and steel,
A millionaire prim and neat
Went out for a ride by the river's side
In a style that was hard to beat.
But alas! he found that the broken ground
And the ruts and the holes so great
Had smashed a wheel of his automobile;
What he said we cannot relate.
Bad roads did it.

But we're glad to say there shines a ray
Of hope that will right this wrong;
When in every state they will legislate
To help the good roads along.
So the man with his wheel or automobile
Will never again get the blues,
And the farmer with smiles will travel for miles
On a road that is fit to use.
Good roads will do it.

Birds in their Old Nesting-places

That birds do return to old spots is apparent in the case of a pair of robins which have nested in our yard for three or four consecutive years. The female is extremely pugnacious, fluttering into one's very face, scolding vehemently if we chance near her nesting-place. The male makes almost as many threats, but he always takes a perch on a tree near by just out of reach—and, I may add, out of danger. At first he assumes a most threatening air. But when this fails he confesses that his maximum is reached. Not so with his mate, who descends to the lower limbs, bristling like a mad hen. And in one or two instances she has even flown against the bonnet of the offender. The demonstrations of this pair are so pronounced as to be readily recognized from year to year. They always build in a Norway spruce, of which there are several side by side. But never have they twice chosen the same tree.—Bessie L. Putnam, in Meehans' Monthly.

The Cultivation of Rice in Japan

[CONTINUED FROM PAGE 1]

are really made to prevent injury by the sun, but are also useful during the rains.

If the rainfall fails, as it sometimes does, then the heavy work is greatly increased, for frequently the fields are watered by hand. A water-wheel is a common means of irrigating the fields from a flowing stream or canal. The wheel is operated by treading it. A heavy pole is thrust deep into the ground, and a man destitute of clothing save a loincloth mounts the wheel, and hanging to the pole with an iron grip his feet fly from spoke to spoke with such rapidity that electricity seems an unnecessary force. This throws the water into furrows, and it quickly floods the bed. Finding a small outlet, it slowly courses from one section of the field to the other, but constant treading is necessary in order to keep up the supply. It is doubtful if the genius of man has ever devised so many modes of irrigation as are found in Japan. This is doubtless due to the knowledge of the vast interests at stake in the failure of a rice crop. It is a question whether the people could ever be induced to change their system as it has obtained for several thousand years even if they knew modern methods greatly decreased toil.

The rice-plant forms a single blossoming ear, containing from thirty to sixty grains, and when developed to the fullest frequently a hundred grains are found. In a good season the yield is forty bushels to the acre, but much depends on the rains. There are about two hundred species of the grain, some of which ripen early and some late.

JAPANESE WOMEN THRESHING RICE

The process of threshing is very like that applied to other grains. The stalks are dragged through the bamboo teeth of a long comb about two feet in length set up against a prop by placing the bandle in the ground. The grains are often separated from the straw by beating them against a tub or by putting them into a stamping-tub and treading upon a beam, which beats the grain out. The cleaning is not done on a threshing-floor, but the mixture is held at arm's-length and poured from a large scoop to the ground. This is done in a windy place, the breeze catching the chaff and carrying it away, and the grain falling to the mat.

A very crude arrangement, made entirely of wood, constructed in such a manner as to separate the rice from the chaff, seems to do the work successfully, but few indeed are the farmers who possess one or who probably know of such a contrivance.

For all the hard work of the summer the farmer will probably realize enough to get his winter bedding and clothes out of pawn, and by strict economy manage to carry his family through a cold, cheerless season. His only hope is that springtime will bring warmer days even if with heavier work.

Taxes are usually paid in rice. At one time the taxes were so heavy that the government became the great rice merchant of Japan, selling the surplus in the markets of the islands after retaining the army and navy supply, which was an astonishing amount.

Tiger-hunting

"The Bengal tiger is more cruel and astute than the African lion, though he, too, may be scared off. When he attacks a man, however, he makes short work of him, and consequently big-game hunters employ a method in killing tigers that is very one-sided for the hunter. So powerful that he can break the back of an ox with his paw, and carry the carcass away without its touching the ground, relentless besides, the sportsman who has a desire to enjoy civilization again does not even take the chance of remaining on earth with a tiger. He gets up a tree.

"'You have,' explained Mr. Hutchinson, 'what's called a machaud. This is a little hut built in a thick tree. This after you've found villagers who have been bothered with a tiger and know about where he's to be found. Under the tree you tie a bullock at nightfall, and then get up in the machaud and wait. It is pitch-dark, and you can see nothing but the little white phosphorus sight on the end of your rifle, which you keep directed toward the bullock. The first sound from the tiger is a deep, low moan, like the rumbling of falling earth, and as he gets near to the struggling bullock he is caterwauling like a gigantic tom-cat. With a spring the brute lands on the bellowing ox; his eyes gleam in the darkness, and his jaws come together with a crunch. That's the time to pour lead into him.'

"This, though safe, is of course exciting enough, the moments of vigil being passed in tense expectancy and affording one the same exhilaration derived from following a spoor in the jungle when the hunter cannot know at what instant he may come upon game. But the other method of securing tigers is considerably more interesting. When the English officers in India hunger for real venturesome sport they invade the jungle with elephants and horses, trusting to kill the creature before it closes in.

"At the English clubs in Bombay and Calcutta you may be entertained unlimitedly with accounts of such expeditions, but the most singular one I know is that of a smart young officer, who won his life quite honestly from a tiger after being pulled from an elephant and almost slain. This tiger started up from his lair at the approach of the line of elephants, and did not wait for attack, but selecting the nearest sprang fiercely to his back. A dozen shots were fired at the tiger while in midair, and several struck home, but he landed, nevertheless, blood-flecked and savage. Seizing the officer about the waist he dropped to the earth and started for the jungle. Afraid of killing their comrade, the others did not dare shoot, and with sorrow in their hearts began to follow the bloody trail. What was their astonishment half an hour later to come upon the tiger lying dead. The officer was sitting by groggy but conscious, holding onto his empty revolver. Though terror-stricken, he had presence of mind enough while traveling along with the tiger to slip the pistol from its holster and put two shots in the animal's brain. Death was instantaneous."—Allen Sangree, in Ainslee's.

Chief Arthur's Defense

"We attend strictly to our own business," the Chief says. "We have never in any strike asked aid of any one or anybody. We have never asked for a dollar, and we have never asked another railroad man to quit his job to help us win our fights. In one strike we did tell our firemen that if they refused the engines that our men had given up we would pay them the same money that we were paying to our own men.

"They say we are selfish. If a man comes to me hungry, and I refuse to give something with which to buy food, he has a right to call me selfish. If he comes to me and says that he has thrown up his job, and for that reason asks me to throw up mine, that is a different matter altogether, and he has no right to criticize me if I refuse such an absurd request.

"We are under contract with a great many railroads. So long as these roads keep the terms of their contract with us we must abide by our side of the agreement, and it would be a travesty on honesty if we were to violate this contract and stop work because some other body of men could not get along with their employers.

"Honesty and character must be the basis on which success is built. The relation between employer and employed must be on a basis of mutual confidence. Our pride is that we keep our contracts once made, and we are then worthy of this confidence. If we violated these contracts at the first call from other organizations we would have no reason to expect our employers to keep their side of the same contracts."—Frank Leslie's Popular Monthly.

American Sculpture to the Front

Facing the Palace of Commerce at the Charleston Exposition is the Aztec Group, designed by Mr. Louis A. Gudebrod, of New York City, who is director of sculpture for the Exposition. In accordance with the semi-tropical effect of grounds and buildings he has chosen his subject from the Children of the Sun, the most advanced and wonderful people discovered in America. The piece consists of two statues, the great Inca, Atahualpa, a commanding yet suppliant figure, erect in worship, face and hands uplifted and facing the glorious western sun, forming an imposing background for the kneeling figure, which suggests a feeling of deep, reverential worship of a deity. This group represents an incident at the meeting of Atahualpa and Pizarro. When urged by a friar to abjure the errors of his faith and acknowledge himself the vassal of the Spanish King, the Inca, sedate and dignified, arose and replied that he would not yield obedience to any man, adding, "As for my faith, I will not change it. Your own God, as you say, was put to death by the very men whom he created. But mine," lifting his arms toward the setting sun, then just sinking beyond the towering peaks, "my God still lives in the heavens and looks down on his children."—Frank Leslie's Popular Monthly.

And thou, too, whoso'er thou art,
That readest this brief psalm,
As one by one thy hopes depart,
Be resolute and calm.

Oh fear not in a world like this,
And thou shalt know, ere long,
Know how sublime a thing it is
To suffer and be strong.
—Henry Wadsworth Longfellow.

What the poet writes,
He writes. Mankind accepts it if it suits,
And that's success; if not, the poem's passed
From hand to hand, and yet from hand to hand,
Until the unborn snatch it, crying out
In pity on their fathers' being so dull,
And that's success, too.
—Elizabeth Barrett Browning.

Bright's Disease and Diabetes Cured

Under the Auspices of the Cincinnati Evening Post Five Test Cases Were Selected and Treated Publicly by Dr. Irvine K. Mott Free of Charge

University Chemist Acting as Referee

Irvine K. Mott, M.D., of Cincinnati, Ohio, well and favorably known in that city as a learned physician—a graduate of the Cincinnati Pulte Medical College, and of the London (Eng.) Hospitals, has discovered a remedy to successfully treat Bright's Disease, Diabetes, and other kidney troubles, either in their first, intermediate or last stages. Dr. Mott says: "My method arrests the disease, even though it has destroyed most of the kidneys, and preserves intact that portion not yet destroyed. The medicines I use neutralize the poisons that form a toxine that destroy the cells in the tubes in the kidneys."

The *Evening Post*, one of the leading daily papers of Cincinnati, Ohio, hearing of Dr. Mott's success, asked if he would be willing to give a public test to demonstrate his faith in his treatment and prove its merits by treating five persons suffering from Bright's Disease and Diabetes, free of charge, the *Post* to select the cases, and examinations to be made in the medical department of one of the most prominent universities in the United States.

Dr. Mott accepted the conditions, and twelve persons were selected. After a most critical chemical analysis and microscopic examination had been made in the university laboratory five out of the twelve were decided upon, the Professor making the examination remarking, "I should say they are all fatal cases." These cases were placed under Dr. Mott's care and reports published each week in the *Post*. In three months all were discharged by Dr. Mott as cured, the final examination being made at the university. The persons treated regained their normal weight, strength and appetite, and were able to resume their usual work.

Any one desiring to read the details of this public test can obtain copies of the paper by writing to Dr. Mott for them.

This public demonstration gave Dr. Mott an international reputation that has brought him into correspondence with people all over the world, and several noted Europeans are numbered among those who have taken his treatment and been cured, as treatment can be administered effectively by mail.

The Doctor will correspond with those who are suffering with Bright's Disease, Diabetes or any kidney trouble whatever, and will be pleased to give his expert opinion free to those who will send him a description of their symptoms. An essay which the Doctor has prepared about kidney troubles and describing his new method of treatment will also be mailed by him. Correspondence for this purpose should be addressed to IRVINE K. MOTT, M.D., 117 Mitchell Building, Cincinnati, Ohio.

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A contest for raising corn and beans and growing roses. See Page 23 of this issue of the Farm and Fireside for full particulars.

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CLOTHES FOR BOYS

BY GERTRUDE K. LAMBERT

How often one hears the remark, "Oh, dear, if my little boys were only little girls I could dress them so prettily," or something to that effect. It is a sentiment, however, with which I have little sympathy, for in my opinion little boys may be dressed quite as "prettily" as little girls, and at much less trouble and expense.

To begin with, just because boys are "only boys" don't think or feel, and above all don't say "anything will do" or "it don't make much difference." It does make a difference, just as much difference as with girls, whether your boys are neatly and becomingly dressed or not; at least I have failed to meet a boy, little or big, who did not appreciate suitable and modish dress quite as much as did his girl companions, and to have quite as clear and independent ideas on the subject. The truly tactful mother will begin early to consult her boys' taste in regard to his clothes—subject, of course, to her judgment. A very small boy indeed will observe the difference between boys' and girls' dress, and take great pride and satisfaction in boyish effects in his own clothes, and a little later will bitterly resent anything approaching "sissy fixings" in the way of personal adornment. It is only right to respect this feeling, even by making the little short dresses in distinctively boyish fashion. This is easily done by omitting "frills," and trimming plainly with braid or stitching, and adding deep sailor-collars and cuffs instead of lace and ribbons, such as delight the hearts of little girls.

A favorite style with my small boys was a little dress made in one piece, with a wide, double box-plait below the short yoke in the back, and three single box-plaits from the neck in front, finished with a sailor-collar, wide cuffs and belt, and fastening under the middle plait in front to the belt, which was fastened with a buckle, or imitation. The plaits should be caught down at the belt and hang loose below.

Another style was a circular skirt, with the belt finished with buttonholes. This was buttoned to a light shirt waist, such as was afterward worn with the first trousers. Over this was worn a short bolero.

After these comes the little knee-pants, worn with shirt waist or blouse, with a reefer for cold weather. If the small man begs for "long pants like papa's," procure a pattern of the "brownie" overalls and make him a pair. Teach him to slip them off and hang them in their place before appearing in the parlor after work-hours.

I do not enter into details in describing the different suits for the reason that most of our home papers contain a pattern department where the latest styles in dress for the whole family are pictured, and patterns offered for sale at a merely nominal price—ten cents each as a rule. By consulting a late paper ideas for making the small boys' clothes may be gained and reliable patterns easily secured to insure against failure in trying to develop the ideas.

Allow me to say, furthermore, that after dressing your boys as "prettily" as though they were girls, why not use the same loving, tender care in teaching them dainty, gentle ways, scrupulous cleanliness, purity of person, heart and mind? There is very much said and written these days about giving our girls an equal chance with their brothers; but not until our boys are given an equal chance with their sisters will there cease to be occasion for the general agitation of the subjects of "Social purity," "Moral equality of the sexes," "White life for two," etc. Heaven hasten the day.

Pay Attention

How many people there are who do not do it. How insulted they would be if it were intimated that they were rude and ill-bred. But what else can it be called when a person does not attend to what is being said, and lets his or her mind wander to other matters?

Sometimes one of these absent-minded people will appear to listen, but there will be a vacant look in his eyes, and if you stop speaking in the middle of a sentence he will not notice, or will begin to talk of his own affairs immediately. There are some who break in on what you are saying, and although they think they are carrying on the same conversation, you can see that they have not heard what you have said.

There are times when any of us are likely to have things on our minds that we are puzzled or worried about. This naturally makes us absent-minded. But if we could have will enough to banish such troublesome thoughts, and pay strict attention to those who are talking to us, our problems would be more easily solved when we go back to them, our minds having had a change. Not only this, but we would not make ourselves so disagreeable to our friends. It is very hard to talk to a person when every nerve has to be strained in order to hold his attention.

People who get into this habit are shutting themselves out of much pleasure. You ask one of them if he heard what some one said on a certain subject. Why, no, he hadn't heard anything about it, and he wears a look of injured innocence. You know that the reason he did not hear was because he had shut himself up with his own thoughts.

I know a woman past middle life who has not a trace of this habit. She has had only the slightest of educational advantages, and yet she is more than ordinarily intelligent. I believe it is because she always pays strict attention to what is said to her that this is so. It is a pleasure to talk to her. No matter what you say, she is alive to every word of it, and shows an intelligent interest. There is no strain to hold her attention, and when you get through she will make some remark that shows her comprehension of all she has heard. She is intensely interested in people and their experiences. How much more she gets out of life than if she went through it in a half-dazed condition because of thinking always of her own affairs.

Susan Brown Robbins.

Counting the Cost

About the year 1720 Max Jukes was born. He belonged to the criminal class, was a hard drinker, and married a drunken and dissolute woman. Of twelve hundred descendants every one has proved a criminal, a pauper or has become insane. Only twenty ever learned a trade, and ten out of that number learned a trade in state prison. Twenty years ago this brood had cost the public one and one half million dollars for prosecution and support.

In the year 1703 Jonathan Edwards, the great New England preacher, was born. He married a sweet, pure woman. In the history of fifteen hundred of his descendants we find but six criminals, and not one pauper or imbecile. They have been preeminent in education, literature, statesmanship, mining, law, medicine and theology. Among the number were two hundred and eighty-three college graduates and thirteen college presidents.

Does this prove that the children of drinking parents are born drunkards? No; it proves that a man or woman born in the midst of crime, breathing the air of drunkenness, poverty and squalor, cannot be anything else but what his environment makes him.

I have seen the son of a minister of God and a pure, conscientious, lovely and loving woman go straight to destruction because circumstances threw him among a drunken and dissolute set. I have seen the son of a drunken father and a miserable, dissolute mother rise to an exalted manhood because he was adopted and reared by a noble woman and a grand Christian man. It is all a matter of education, of environment and right living.

No man was ever born a drunkard. A drunkard is always made in the same way, and it does not make any difference whether it is a man or a woman, a boy or a girl, a dove or a canary-bird, if you begin by giving any of them a small amount daily, and gradually increase the dose and the frequency of giving it, you will make of it a drunkard.

It usually takes about two years for the average young man who begins by drinking a few small glasses of beer a day to develop into a common drunkard. Five years more makes him a victim of chronic alcoholism, and then he is diseased. But the disease is a result of his drinking, and not the cause.

If you teach the pernicious doctrine that the child of a drunkard is born with an appetite for whisky, and that he gets drunk because he has to, you take away from him all moral responsibility to God and to society, and place him on a level with all brute creation. There is no class of men in the world who so quickly learn to drink whisky as the North American Indian, yet we cannot say he was made a drunkard by his ancestors.

The self-inflicted penalty for intemperance is poverty, disgrace, disease, insanity and death, and if we have such a life we pay the penalty, and we pay it now. We may escape the poverty if we are rich enough, but we will get all the rest. Right thinking and living lead upward to God. Wrong thinking and wrong living lead downward to death. George D. Swain, M.D.

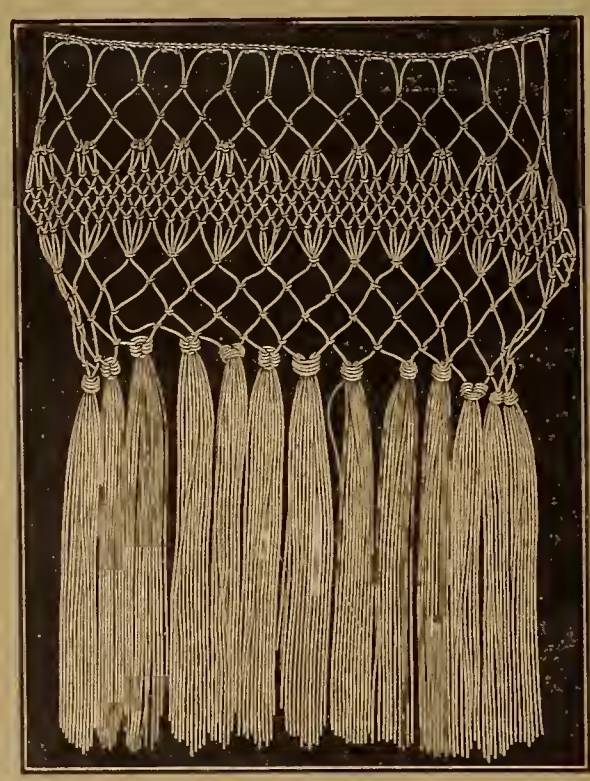
A Round of Beef

Co-operative housekeeping is quite often discussed as a way of solving the vexing domestic problem, and co-operative purchasing among small families may be practised without inconvenience. If rightly managed it will greatly reduce the food-bill of the family without decreasing the quantity or quality of food.

A round of beef from a small steer will weigh about eighty pounds, and cost in the Boston market about eight cents a pound. The flank, which would naturally be cut off first, may be used for Hamburg steak, may be corned, or is not to be despised if rolled and baked. The aitchbone will make an excellent pot-roast. The slices of steak next cut, and which are generally sold as top of the round steak, should bring at retail twenty-five cents a pound. The under part may be used as a pot-roast; and if two parties purchase the meat, by one taking the aitchbone and the other a like amount from the bottom of the round where the upper part has been cut into steak an equitable division would be established. The steak cut thus far, the flank could easily be equally divided. Next should come slices cut right through, which may be used by the consumer as desired, a very good way being to cover a slice with a dressing like that made for poultry, roll and bake it. Two more pot-roasts could then be cut off and the remainder used for Hamburg steak, for stews, or cooked very slowly for a long time, chopped, then pressed, to be served cold. In a cold place such a piece of meat could be kept for two weeks, so that the families using it need not live on beef all the time in order to use it up, lest it spoil. Other ways of cooking the meat will suggest themselves, such as meat-pies, meat for mince pies, etc. The shank could, of course, be purchased separately for two cents a pound less than the whole round would cost; but as the amount of cheap meat is so small in comparison with the amount which would retail for fifteen cents a pound or more the saving on the whole is large.

A lamb, or yearling, might be purchased in the same manner. Dealers usually ask for a shoulder of lamb the price which they pay for the whole lamb, making their profit from the loins and legs. Almost any family of average size could use half a lamb in cold weather before it would spoil. So it will be seen that while the average price for a fore quarter of lamb is about ten cents a pound, a whole one may be purchased for the same price a pound; bought in this way, neither the leg, which would retail for fifteen cents, or the chops, which would bring twenty-five cents a pound, would cost over ten cents. Such facts as these should be carefully studied by families and those who have a few boarders.

Inez Redding.



NETTED FRINGE

Practical Exercise

How dreadfully some people hate dish-washing. I once heard a lady—a fine housekeeper, too—say that she "could not lose her time in dish-washing."

To me there is a real fascination in washing dishes—piles of well-rinsed cups and saucers, well-scraped groups of plates, layers of knives and forks and spoons—then the glassware. They all look interesting to some young, newly wedded housekeeper, who has perhaps never washed dishes half a dozen times in her life, but who is now doing her own work. I will say that of course the glassware comes first in the dish-washing. To my notion the cups and saucers come next, then the spoons and the knives and the forks, then the bowls and the tureens, followed by the dinner-plates, meat-platters, pans, skillets and kettles. When milk-vessels are to be washed a clean water should be prepared for them.

And to this same ambitious, neat housewife I will say further that she should not get a full pan of water at first for the dishes, but begin with a little and then add hot water as it is needed. We are old-fashioned enough to believe in rinsing the newly washed dishes with clear, hot water.

One time I heard a blunt woman tell a convalescent girl that she would get better more rapidly by washing dishes for her mother, who was doing her own work. The girl took the blunt woman at her word, and from that day she did the dish-washing. The warm water and the light, pleasant work of the dish-washing helped the girl more than she had even hoped for. Her system toned up under the exhilarating influence of the pleasant steam of clean dish-water. A new sparkle came into her eyes, elasticity to her steps, and she took a new hold on life. Therefore, invalids, you dear "shut-ins," do not wait for Turkish baths. Just get up and wash the tired mother's great heap of dishes, and behold! you have found the Fountain of Youth. Girl students could write their graduating essays much better after washing the morning and the evening dishes.

Therefore let me repeat, to my notion dish-washing is one of the greatest exercises for good health, happiness and even success in life. Mary E. P. Holmes.

Tongue

The story of one's early mistakes in housekeeping is not at all funny until they become ancient history, and as the family have heard the story before, and enjoyed it, I thought perhaps some one might be benefited by being steered clear of the shoals on which I stranded so often.

I was to have a birthday entertainment soon after going to housekeeping, and, like many other young wives, I wanted to do it all myself. The two mothers were easily disposed of when they saw how anxious I was to try, and let me alone. But a very officious sister-in-law was anxious to engineer the affair, and determinedly insisted on suggestions as to the bill of fare, although I had it all planned. One of the items was sliced tongue. Now, I never had in all my life before seen tongue as food except nicely sliced upon the platter, and I just jumped at the conclusion it was an edible similar to dried beef, and obtained ready sliced at the butcher's. In those days ready-cooked foods were not so obtainable at our markets as now, so when the butcher at my request for tongue laid out on the counter a thin, shrunken, small-looking tongue, I stammered, "It is so small, I guess I'll take four."

"Oh," he said, "it will swell some when it is cooked."

"Cooked! Does it have to be cooked?"

"Oh, yes; two or three hours."

I was anxious to know more, but was afraid to ask questions, so I finally settled that maybe two would be enough.

I put them on to cook, and as they swelled the pot got too small, and I finally transferred them to the new wash-boiler to give them plenty of room. I couldn't quite understand how my sister-in-law could have thought of suggesting them as easily prepared, for I thought them very troublesome.

Just as I was taking them off the stove she came in and asked how I was getting along.

I said, "All right."

"Your tongue boiled?"

"Yes; all done."

"Have you skinned it?"

"Skinned it? What more must be done to that before it is ready to eat? I thought you said it was an easily prepared dish."

"Oh, yes, it must be skinned while it is hot, or the skin won't come off."

So I repaired to the kitchen to do it.

Well, I can assure you I had eaten better tongue at home of dear old black Molly's preparing. Mine didn't look like hers by any means, but they ate it. Later I learned the right way to do it, and, like the Sunshine Club, pass it along to some one else who knows lots about books, school, sewing, etc., but nothing about cooking.

Soak your smoked tongue four hours in fresh water, then place it in a kettle large enough to contain water sufficient to cover it well. Have the water a little more than lukewarm to start with, and cook slowly for four hours, occasionally putting in a little cold water to keep down the boiling. Some people add a little sliced carrot, a small onion and a stalk of celery to it while cooking, but I never liked it so well, and cooked mine plain.

When you can stick a fork well into it lift it and put it into cold water to loosen the skin, then slit it down the middle and peel it off. It can be served cold or hot, just as you like. I usually prepare it on Saturday, and keep it for serving sliced for Sunday tea and through the week.

Fresh tongue does not need to cook so long, and whether it is of beef or lamb I put into spiced vinegar when done, and by preparing a number at once have them on hand for supper meat. After removing the skin place them in a crock that you can cover well, add one tablespoonful of sugar, one teaspoonful of salt, one teaspoonful of whole cloves, a stick of cinnamon, some black pepper and four or five whole allspice; turn on them enough hot vinegar to cover them, cover with a plate, and weight them down to keep them under the vinegar. Tongue is a very nice relish, and a dozen lambs' tongues will not last very long. Keep them in a cool place; in summer in the refrigerator if possible. W. D. Marsh.

Girls' Dress

Why don't girls see the folly of warin' tite an' heavy clothes? The way they dress is unhyjenic. Look at boys' clothes—all loos an' lite! They can do anything they pleas—bend backwards an' forrards, from side too side an' up an' down without ripin' or taring somethin'. Well, even if girls didn't mind tarin' there clothes they couldn't because of there corsitts—those things that they say make girls pritty. For me, I'd rather see a good, stout, healthy girl than to see these stiffs.

When a girl's rigged, with her hare done up with 40 hare-pins an' a fuzy mouse (I gess it's a rat), an' a chokin' collar an' bussels an' heavy skirts an' hy-healed shoes, no wonder she can't walk far without feelin' sick an' tired. I reckon a boy wood feel about the same if he had to go round with a tee kettel on his hed an' ropes round his vitals with half a dozen flat-irons hangin' from 'em.

A lad could get reddy for Urip in five minutes, while a girl won't be reddy for church in an hour. I'm mity glad I don't have to waist so much of my time dressin'. A boy's clothes are comfortible an' hyjenic an' don't cost as much as girls' by half, an' shows how much more sense they have than girls. A Boy.

The Care of the Hair

Hair is an index of the health, and if we wish the hair to be fine, glossy and beautiful we must breathe plenty of fresh air to oxygenate the blood, eat nourishing food and keep up a good circulation. The woman who lives on pastry, leads an indolent, indoor life, and gives herself up to worries, tears and an irritable temper, can neither expect abundant health nor a luxuriant wealth of hair.

Men should take a shampoo once a week, and women once in two weeks, or at least once a month. The scalp requires systematic cleansing as much as any other part of the body, as the outer layer of the cuticle, or scarf-skin, is continually being shed to be replaced by new growth. This dead skin, or dandruff, is mixed with dust and dirt, and the accumulation disturbs the nutrition of the scalp and injures the hair. It loses its gloss, splits at the ends, then becomes raggedly thin and falls out.

It is said that a wash made from equal parts of the tincture of sulphate of quinine and aromatic tincture will stimulate the growth of the hair in case of baldness. Half a pint of bay-rum to which has been added ten grains of quinine and a little glycerin is a good preparation to give life and gloss to the hair.

Before shampooing the hair it is well to rub the scalp with a little bland oil, such as vaseline or oil of sweet almonds. Lemon-juice is also healing to the scalp, and may be rubbed on before washing it. An egg-shampoo is the best of all. Beat the white of an egg as for frosting, add a little water and lemon-juice, and rub on the scalp gently with a nail-brush. Let it remain on a few moments and then wash it out thoroughly with warm water, rinsing the head well. Some prefer the yolk of an egg used the same way.

After a shampoo let the hair dry thoroughly before beginning to comb it, as the snarls and tangles come out much easier. In smoothing fine hair that tangles easily never jerk and pull it, but taking hold of it firmly comb the bottom first to avoid breaking it.

A brush can be used for short hair if the bristles are not harsh, but for long hair one must be careful in brushing to give only short sweeps, as the hair is elastic and long sweeps stretch and break it. Split and broken ends should be trimmed once a month, and this can be done by rolling the hair into a tight twist and running the scissors over it lightly.

Borax or any preparation which dries the hair will soon leave it gray. I know a lady of seventy whose glossy raven locks are just silvered becomingly with gray, but she uses an egg-shampoo and never allows the oil to be washed out of her hair. Another lady past seventy told me the brown of her waved montagues had been preserved by using the tiniest bit of vaseline on her hair every night before retiring. F. B. C.

Seasonable Suggestions

As the short winter days lengthen into spring, and the supply of fruit and vegetables disappear from pantry and cellar, the thrifty housewife bestirs herself in search for other things to take their place and make a suitable variety in her every-day menus.

Receipts she can find in abundance, for there is hardly a paper or magazine nowadays but what has a part exclusively devoted to the culinary department. Usually those which call for ingredients that are always to be found in our country homes are the ones we find most useful.

Here is a receipt for a pie which is an excellent substitute for lemon pie, and is really delicious. It is called buttermilk pie. Two thirds of a cupful of sugar, one teaspoonful of flour, butter the size of a walnut, yolks of two eggs; stir well together, then add one cupful of buttermilk, flavor with lemon extract, and bake in a crust. This makes one pie. Use the white of one egg for the top.

The old-fashioned Boston brown bread required so long a time for steaming that I often neglected making it on that account. Here is a receipt for one that is baked in a moderate oven one hour, and is very nice. One cupful of buttermilk, one cupful of molasses, one egg, two cupfuls of graham and one cupful of white flour, one teaspoonful of soda and a pinch of salt; bake in a one-pound baking-powder can. This quantity is sufficient to fill three cans. Fill your cans half full of the mixture, and with a moderate oven they will raise to the top, and be a beautiful brown when done. Sweet milk can be used when buttermilk is not plentiful. Dissolve the soda in a little hot water, and stir into the molasses. Corn or salmon cans with their open ends melted off can be used if you have not the baking-powder cans. This bread is very good served with baked beans.

The yolks of the eggs that are left when baking a white cake will make a mayonnaise dressing, which can be used on cold meats or baked beans. Eggs cooked in any way and onions sliced thin are an excellent relish served with this dressing.

To make mayonnaise dressing use the yolks of six eggs, one fourth of a cupful of sugar, one fourth of a cupful of butter, one teaspoonful of mustard, one teaspoonful of salt, one cupful of good vinegar, and cook in a double boiler. This will keep a long time when bottled. Thin with cream when using.

A quick pudding that with a biscuit-oven can be made and ready for the table in half an hour is very good when made of one pint of flour, one egg, butter the size of an egg, and one teaspoonful of baking-powder; add enough milk to make a batter; oil a pudding-pan, put in the pan one half can of seeded cherries, sprinkle with sugar, pour over this the batter, and bake. Serve with whipped cream.

A nice dessert, warm bread or salad added to plain food only once a day give the effect of change and variety with very little trouble.

A. B. Randall.

Lace Center

Make the center of fine butchers' linen eighteen inches square, cutting out the corner to accommodate the lace. Use the largest-size Honiton for the first edge and smaller mesh. Fill in with lace-stitches.

The Coming of the Superior Wife

If the American wife has a fault it is lack of appreciation of the sterling qualities of the man who takes care of her.

Modern conditions have brought into existence a large leisure class of wives—wives with time to think and to study, and who are emancipated from the imperative things which must be done lest the children go dirty or the husband hungry.

Women's work, in fact, in these latter days is largely along the line of philanthropic, social or intellectual endeavor, self-assumed and carried on for the pleasure or because of special fitness.

Not so the work of the modern man.

For him life is primarily a struggle for existence. The American man must work, work, work, that he may win even partial success, and this requires serious co-operation on the part of the wife. Often his devotion to money-making is the very thing that separates him from his wife, and yet it is his desire to give her leisure and comfort that spurs him to efforts beyond his strength—efforts that bring him home nerve-racked and irritable, to find a cool and top-loftical companion, who wonders at his lack of social qualities and of general information.

Having, therefore, acquired a certain amount of culture at her husband's expense, the superior woman rarely meets him on equal ground. She trots him to expositions and fairs, and wonders why he looks bored when she talks of Russian bronzes and Sargent's portraits; but is she interested in the transportation department or in agricultural implements? If he had given his life to the things which please her it is not likely that she would have the opportunity to see Europe or her own country, secure in the knowledge of a correct gown and the prestige of a heavy bank-account. Her husband has had to be interested in trains and grains because her bread and butter and the bread and butter of the children have depended upon it.

But the woman is not entirely to blame for this state of affairs. In pre-matrimonial days John says to Mary, "My love, I do not want a cook. You shall sit on a cushion and sew a fine seam, and feed upon strawberries, sugar and cream." And why should John feel the need of a cook in the days when his fancy lightly turns to thoughts of love? At that time his food is ambrosia and his drink nectar. He praises Mary's ability to play divinely, to write creditably, to preside effectively, and Mary goes into the bonds of wedlock believing that life henceforth will be a song, a poem or a glorified club meeting, and she congratulates herself that she has met her twin soul.

Later Mary discovers that John is a mere man; that he loves beef better than Browning, and prefers bonds to Beethoven; that the state of the market exceeds his interest in Maeterlinck. She then concludes that his nature is opposed to combined and harmonious action, wraps herself in a mantle of intellectual and spiritual superiority, and becomes at once an irritating influence in John's hitherto peaceful existence.

Now, why should Mary arrogate to herself all the virtues because Browning and Beethoven and Maeterlinck are the lights of her soul? Life is something more than literature or music or symbolism, and the man who can act is the superior of the woman who dreams, and his healthy and practical nature is more to be commended than his wife's aspirations for the unattainable.

Strict moralists will tell you that a person cannot be too perfect, but you and I know that there is no human being so intensely trying as the one who is always in the right. In a recent novel one of the characters is made responsible for her own death, the author claiming that uxoricide was the natural result of the circumstances—the inevitable outcome of the maddening effect of a hard, calmly complacent nature on an excitable, sensitive one.

It is the superior woman who looks with disdain upon Mrs. Domestic. Why? Was the paper that Mrs. Superior read before her club on "The Rubaiyat—Omar or Fitz-Gerald" of more real value to the world than Mrs. Domestic's receipt for macaroon pudding? The grace of style and fertility of imagination displayed by the writer of the paper pleased Mrs. Superior's hearers; but then, too, the hearts of Mr. Domestic and all the little Domestics were made glad by meringue and custard.

In suggesting a remedy the trouble lies in the fact that most superior wives are blissfully unconscious of any need for action in the matter. They little understand that the scolding wife of the past, of whom Socrates exclaimed, on seeing the body of one of these termagants hanging from the limb of an olive-tree, "Oh, that all olive-trees might bear such fruit!" has been superseded by the equally irritating type of to-day.

The wise woman, however, will recognize the danger and the injustice before it is too late. She will not think too much of her own individuality, but will study the interests of her husband. She will take a day and go fishing with him, and she will find, perhaps, that he has more knowledge of birds and trees and fish and insects than has she, with all her nature-study, and her respect for him will increase. She will let the cares of club and society slip from her when he comes home tired at night, and will read with him the funny book that he enjoys rather than the problem novel which claims her attention. She will give him the things he likes for dinner, and will not think that she is catering to a lower appetite, but will understand that she is building him up in brain and body to fight battles, which are perhaps more worthy, if less picturesque, than those fought in the days of chivalry. A well-set table and a well-served dinner are to the husband what a nocturne and a sonata were to the lover—both put him into a feeling of sympathy with all mankind, and into a complacent attitude toward the woman who makes the music or the pudding.

The woman who will do this will find that into her home comes no dark shadow of discontent or dislike, creeping, creeping, to be blazoned forth some day to a curious world as "incompatibility of temper."—Temple Bailey, in Home Monthly.

April

Oh, April is a dainty dame,
  She wears the sweetest dresses!
Her eyes are like the still blue flame,
  And sun-gold are her tresses

Her wee, wee feet are soft and fleet,
  Her form one barely guesses.
Oh, April is a dainty dame.
  And wears the softest dresses!

Oh, April is a dainty dame!
  Of all the year-child faces
Hers never stays an hour the same,
  She has so many graces!

Her smile or sigh, it is so shy,
  Half hid in budding mazes,
For April is a dainty dame,
  And wears the finest laces.

—Mary Mitchell, in New York Ledger.

Three Little Kittens

Three little kittens, so downy and soft,
  Were cuddled up by the fire;
And two little children were sleeping aloft,
  As cozy as heart could desire,
Dreaming of something ever so nice—
Dolls and sugar-plums, rats and mice.

The night wore on; and the mistress said,
  "I'm sleepy, I must confess,
And as kitties and babies are safe in bed,
  I'll go to bed, too, I guess."
She went up-stairs, just a story higher,
While the kittens slept by the kitchen fire.

"What noise can that be?" the mistress said.
  "'Meow! meow!' I'm afraid
A poor little kitty-cat's fallen out of bed!
  The nice little nest I made!
'Meow! meow!' Dear me! dear me!
I wonder what can the matter be?"

The mistress paused on an upper stair,
  For what did she see below
But three little kittens with frightened air
  Standing up in a row!
With six little paws on the step above,
And no mother-cat to caress or love!

Through the kitchen door came a cloud of smoke!
  The mistress, in great alarm,
To a sense of danger straightway awoke;
  Her babies might come to harm.
On the kitchen hearth, to her great amaze,
Was a basket of shavings beginning to blaze.

The three little kittens were hugged and kissed,
  And promised many a mouse;
While their names were put upon honor's list,
  For hadn't they saved a house?
And two little children were gathered tight
To a mother's heart ere she slept that night.

—Home and School Visitor.

Salads and Salad-dressings

The lessons in cooking, superintended by Miss Pike, at the Mechanics' Institute, in the city of Rochester, constitute an interesting feature of the entertainment there offered to visitors. These lessons are conducted upon strict normal principles, each step in the process being developed by questioning the pupils. Miss Pike is evidently a firm believer in the healthfulness of salads, and thinks they would be found more frequently upon American tables if the preparation of them were more definitely taught, and therefore better understood.

The following receipts for salad and salad-dressings may be relied upon, as they have been thoroughly tested at the Institute.

Nuts and Celery Salad.—Cut the celery in crescent-shaped pieces, and slice the walnuts, using half as many nuts as celery. Add French dressing, and arrange on celery-leaves, garnishing with celery.

Tomato Jelly Salad.—To one cupful of cooked and strained tomato add one and one half teaspoonfuls of softened gelatin, seasoning with salt. Cool in individual molds, putting one teaspoonful of mayonnaise dressing upon each. Garnish with water-cress.

Tomato Jelly Salad No. 2.—Make a larger amount of tomato jelly, seasoning with salt, pepper, celery and a bay-leaf. Cool in ring molds, filling the center with shredded cabbage, pecan-nuts and French dressing.

Fruit Salad.—Peel, cut in half and remove the seeds from one fourth of a pound of Malaga grapes. Cut two oranges in half, and remove the pulp in distinct pieces. Peel and slice two bananas, then arrange the fruit in alternate layers in a mold. Pour over it a lemon jelly made from one cupful of water, one cupful of sugar, the juice of one lemon and one teaspoonful of softened and melted gelatin. When firm serve with mayonnaise dressing.

Mayonnaise Dressing.—Beat the yolk of an egg in a small cup-shaped bowl with a good egg-beater, and add oil drop by drop until the mixture begins to thicken, then add the oil more freely. When too stiff to beat easily add one teaspoonful of lemon-juice or vinegar, then beat in oil until stiff. Thus alternate oil and cold acid until one cupful or more of oil has been used. Season with one and one half teaspoonfuls of mixed seasoning to one cupful of dressing.

Mixed Seasoning.—One teaspoonful of salt, one fourth of a teaspoonful of mustard and one fourth of a teaspoonful of mixed pepper.

Cooked Dressing.—Beat two whole eggs or four yolks, adding four tablespoonfuls of hot vinegar, and cook over hot water until thick, stirring constantly. Remove from the fire, and add gradually four tablespoonfuls of olive-oil. Season with one teaspoonful of mixed seasoning, and when ready to use it add one half cupful of thick cream.

French Dressing.—Mix one half teaspoonful of salt and one fourth of a teaspoonful of pepper with one tablespoonful of vinegar, and add three tablespoonfuls of oil, beating until blended. L. A. Whitney.

Maple Dainties

Maple Caramel for Cake.—Boil together one cupful of maple sugar, one cupful of "C" sugar, four tablespoonfuls of cream and two ounces of butter until it hardens in cold water; then add one teaspoonful of vanilla extract, and stir rapidly before using as filling or frosting for any kind of cake.

Pecan Cake.—Cream one half cupful of butter, add gradually one cupful of sugar, the yolks of three beaten eggs and one half cupful of milk. Mix one and three fourths cupfuls of flour with two and one half teaspoonfuls of baking-powder, add to the first mixture with three whites of eggs beaten stiff. When the batter is thoroughly beaten add three fourths of a cupful of nut-meats broken in pieces. Bake in a buttered and floured cake-pan forty minutes.

Maple-Pecan Frosting.—Boil one and seven eighths cupfuls of powdered sugar, one cupful of maple syrup and one half cupful of cream until when tried a soft ball may be found in cold water. Remove from the fire, add three fourths of a cupful of nut-meats, and beat until it will spread.—Miss Farmer.

Maple Ice-cream.—Put one pint of maple syrup in a saucepan over the fire, and bring quickly to the boiling-point. Boil for five minutes, take from the fire, and pour slowly over the yolks of six eggs which have been beaten until light and thick. Set over boiling water, and stir and beat until the mixture is sufficiently thick to coat the back of a spoon. Strain and set aside until cold, stirring occasionally. Add one pint of rich cream and one teaspoonful of vanilla, and freeze as usual.—Table Talk.

Maple Mousse.—Whip one quart of cream until it is a fine, firm froth. In another vessel beat the yolks of three eggs until light, then add gradually one cupful of maple syrup, and continue to beat until they are well blended, then whip them gradually into the cream and beat them together well. Put the mousse in a long, slender mold, and cover it tightly, sealing the edge. Pack in salt and ice, and let it stand from three to six hours.

Maple Custard.—Beat four eggs together until light, then add one half cupful of grated maple sugar; beat again, add one quart of sweet milk and one eighth of a teaspoonful of grated nutmeg, and stir until the sugar is dissolved. Pour into a baking-dish, and bake in a quick oven until firm in the center.

Imperial Maple Sauce.—Take one half pound of maple sugar cut in bits, and dissolve it in one fourth of a cupful of boiling water. Set over a good fire to melt quickly. Stir in one half cupful of butter cut in bits. One cupful of maple syrup may be used instead of the sugar. Flavor, if liked, with grated nutmeg. This sauce is nice for dumplings, batter, puddings, etc.

Maple Sauce.—Cream together one teaspoonful of flour and one third of a cupful of butter and add to one half cupful of maple syrup. Let boil, then add a little grated nutmeg, and serve.

The few people in an assembly who cannot use anything frozen would probably enjoy the custard. The syrup and sauces for puddings might be offered for sale in bottles, because many housekeepers keep such preparations on hand to use in an emergency. Virginia Reed.

Concerning Babies

The advice has recently been given, "Do not take your baby in your arms when you are nervous." If this is true when baby is well, it must be insisted upon when baby is sick. You have doubtless heard a loving, devoted mother say of a child that has died, "I did not let her go out of my arms from the time she was taken sick." The mother's instinct makes her feel that her child is safest in her arms. It takes courage for a mother to leave a sick child in its bed, but there are times when a child must not be lifted out of its bed for days, and then only taken into the arms on its mattress.

Some mothers treat their babies as little girls do their pet kittens—tend them to death. Above all things do not pat a sick child. Would you like some one to sit by and hit you on the back for hours at a time when you were weak and suffering? Yet gentle, loving mothers inflict this cruelty upon their helpless darlings. Every one cannot always have good judgment, and in times of great emotional strain it seems cruel and hard to speak of cold reason, yet it is possible for the most impulsive of us to cultivate a habit of good sense in matters where life and health are at stake, and so acquire "sweet reasonableness."

Susan F. Howe.

Home-made Soap is as easy to be had as home-made bread, and no house is managed with the greatest economy without it.

Banner Lye (one can, costing a few cents,) and the grease that is generally wasted in the kitchen, make ten pounds of *pure, hard soap in ten minutes without boiling or large kettles.* One pound of this soap goes as far as two pounds of ordinary soap. It doesn't turn the clothes yellow.

Soft Soap is just as easily made. One can of *Banner Lye* makes twenty gallons. Easy directions on every can.

At your grocer's or druggist's. If you can't get it, send for book, and tell us who your grocer or druggist is. **THE PENN CHEMICAL WORKS Philadelphia**

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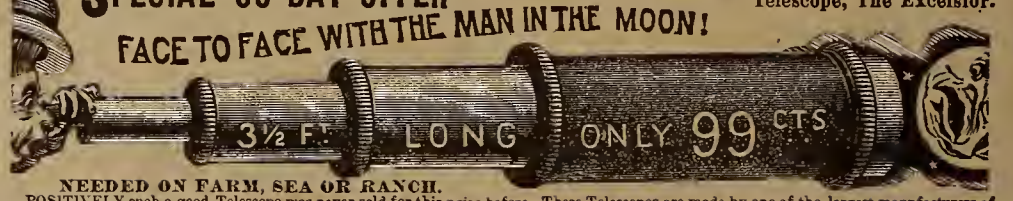
FACE TO FACE WITH THE MAN IN THE MOON!



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Crystal Flake makes Delicious Ice Cream, (used over 20 years by leading Confectioners). If not at your Grocer's send 10c for a package and free directions for making finest Ice Cream, and a practical 20c freezer. Address, Kingery Mfg. Co., B. 22, Cincinnati, Ohio.

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A postal will bring my illustrated folder of Chautauqua desks, **"SPECIAL PRICES TO YOU"** One of these desks should be in every home. They combine beauty and economy. **FRANK McCORD, Oxford, Ohio.**

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or whip known. It does not require to be held hard against the bottom of the dish, thus running any risk of breaking glass or china. There are no parts about the beater that can break. It is made of the most durable material, and has no glass parts whatever. Sent by mail, prepaid. Order as **No. 821.**

We Will Send This Egg-Beater FREE for Sending Only TWO Yearly Subscriptions, New or Renewal, to the Farm and Fireside; or

We Will Send the Farm and Fireside One Year, New or Renewal, and This Egg-Beater for Only 40 Cents.

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ADDRESS

FARM AND FIRESIDE, Springfield, Ohio

Do not fail to read about the great crop-growing contests described on Page 23 of this number of the Farm and Fireside.

SUNDAY AFTERNOON

Quite Foolish is the Man Who Scorns

When disappointment crowns the day,
Don't worry. To yourself just say,
To-morrow may be pleasant.

When path of life is filled with thorns,
Quite foolish is the man who scorns
The hope of future blessings.

Remember that the rain and snow,
As well as warmth and sun's bright glow,
Bring benefits to mankind.

So likewise sorrow, grief and pain
May cleanse you—help you to attain
The strength for life's great battle.

When then on earth your work is done,
If worthily life's race you've run,
Bliss, joy, you'll have in heaven.
—John G. Quinlus, in the Religious Telescope.

Don't Talk Hard Times

I NEVER knew a man to be successful who was always talking about business being bad. Never allow yourself to dwell on the dark side of anything. You should refuse to talk about depressed markets or hard times. Learn to talk up, not down. Many business men become chronic grumblers and faultfinders. Times are always hard with them. Other men get into a pessimistic rut, and never see brightness or success in anything. It is impossible for such people to prosper. Success is a delicate plant, and requires encouragement and sunshine.

Regard yourself as superior to the evils which surround you. Learn to dominate your environment, to rise above depressing influences. Look for the bright side of things, not the dark and gloomy side.

The world likes sunny, hopeful, buoyant characters; it shuns lugubrious prophets, who see only failure and disaster everywhere. The hopeful, cheerful men and women, who see success and longevity in their callings, are the ones who are sought after. It is as natural to try to avoid disagreeable, unpleasant people as it is to try to escape from the dreary clouds and dark shadows into the sunlight.—Success.

Want of Proper Focus

A man may take a dollar or a half-dollar, and hold it to his eye so closely that he will hide the sun from him. Or he may so focus his telescope that a fly or a boulder may be as large as a mountain. Now, let us beware of distortion in the arrangement of the religious truths which we hold. It is almost impossible to get things in their proportion and symmetry, but this is the thing we must be constantly aiming at. We are told in the Bible to "add to your faith virtue; and to virtue knowledge, and to knowledge balance" as the word literally means balance. It is a word taken from the orchestra, where all the parts—the sopranos, the bassos, the altos, the tenors, etc.—must be regulated. If you have too much of the bass or too much of the soprano there is want of harmony. That is what I mean by the want of proper focus.—Professor Drummond.

What the Spider Told

"I was spinning a web on a rose-vine," said the spider, "and the little girl was sewing patchwork on the door-step. Her thread knotted, and her needle broke, and her eyes were full of tears. 'I can't do it!' she cried. 'I can't! I can't!'

"Then her mother came and told her to look at me. Every time I spun a nice thread and tried to fasten it to a branch the wind blew and tore it away. This happened several times, but at last I made one that would not break, and fastened it, and spun other threads to join it. Then the mother smiled. 'What a patient spider!' she said.

"The little girl smiled, too, and took up her work. And when the sun went down there was a beautiful web in the rose-vine and a square of beautiful patchwork on the step."
—Babyland.

The Tremendous Present

There could be no greater folly than for men and women to permit themselves to go tramping across the desert sands of wasted to-days, deceived by the illusion of to-morrow's mirage. Why promise yourself you will be a better man to-morrow than you are to-day? Unless to-day is being lived faithfully there is no hope of your delivering the goods of an honest life to-morrow. Solid character to-day is the only material that you can be sure will not fail you to-morrow.—Louis Albert Banks.

Test for Yourself the Wonderful Curative Properties of Swamp-Root

STRONG INDORSEMENTS OF MEN AND WOMEN CURED

To Prove What SWAMP-ROOT Will Do for YOU Every Reader of the Farm and Fireside May Have a Sample Bottle Sent Absolutely Free By Mail

Among the many famous investigated cures of Swamp-Root, the ones published this month for the benefit of FARM AND FIRESIDE readers speak in the highest terms of the wonderful curative properties of this great kidney, liver and bladder remedy.

A. H. NOONEY

DR. KILMER & CO., Binghamton, N. Y.

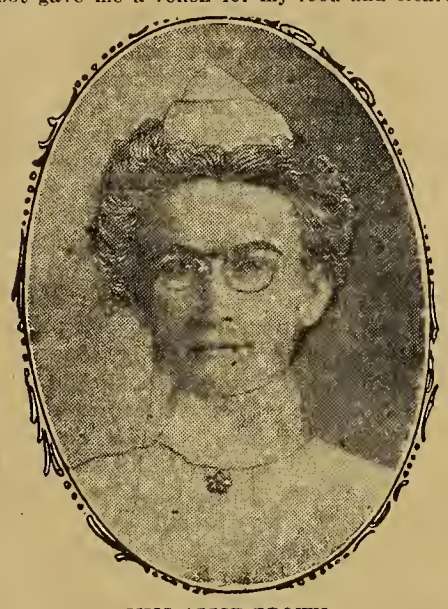
About two years ago I had a very severe case of kidney and bladder trouble. The pain in the small of my back was so severe that I could not stand it to stay in one position more than a moment or two, and was obliged to pass water very often day and night. I tried medicines and doctors without getting relief. Noticing an advertisement in the *Topeka State Journal* of Swamp-Root I determined to give it a trial, and bought a bottle. By the time I had finished the first bottle the pain had entirely disappeared from my back. The pain and frequent desire to pass water ceased. However, I continued to take the medicine, using about six bottles in all. That was over a year ago, and I have had no return of the trouble since.

A. H. Nooney.

Chief Engineer, State Capitol Building,
January 2, 1902. Topeka, Kansas.

Miss Alice Brown, the well-known trained nurse, is in a position to speak with knowledge. She was formerly with the St. Louis Baptist Hospital, and has had many trying experiences in her arduous vocation. She adds her valuable testimony to the thousands already received by Swamp-Root. She said in a signed interview with a reporter of the *St. Louis Star*:

"Although a woman in my position can receive plenty of prescriptions from physicians without cost, it was upon the advice of a well-known West-End doctor that I began to take Swamp-Root. No, I will not tell you his name, for he might not like it. But all the same I took it when I was run down from night-work in the sick-room. I was thin and yellow and tired even when I arose from my sleep. Swamp-Root gave me a relish for my food and cleared



MISS ALICE BROWN

my blood from its stagnant impurities. Of course I do not praise Swamp-Root as a cure for all troubles, but it is splendid for the kidneys, stomach and bowels, and relieves female disorders when all other remedies have failed to give relief. I know of many cases in the hospital cured by this wonderful remedy.

Alice Brown

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SPECIAL NOTICE.—The wonderful remedy, Swamp-Root, is so remarkably successful that a special arrangement has been made by which all readers who have not already tried it may have a sample bottle of Swamp-Root sent absolutely free by mail. Also a valuable book telling all about kidney and bladder troubles and containing many of the thousands upon thousands of testimonial letters received from men and women cured by Swamp-Root. In writing to Dr. Kilmer & Co., Binghamton, N. Y., be sure to say that you read this generous offer in the FARM AND FIRESIDE.

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Weak and unhealthy kidneys are responsible for more sickness and suffering than any other disease, and if permitted to continue *fatal results are sure to follow*. Kidney trouble irritates the nerves, makes you dizzy, restless, sleepless and irritable. Makes you pass water often during the day and obliges you to get up many times during the night. Causes puffy or dark circles under the eyes, rheumatism, gravel, catarrh of the bladder, pain or dull ache in the back, joints and muscles, makes your head ache and back ache, causes indigestion, stomach and liver trouble; you get a sallow, yellow complexion; makes you feel as though you had heart trouble; you may have plenty of ambition, but no strength; get weak and waste away.

The prompt cure for these troubles is Dr. Kilmer's Swamp-Root, the world-famous kidney remedy. In taking it you afford natural help to Nature, for Swamp-Root is the most perfect healer and gentle aid to the kidneys that is known to medical science.

If there is any doubt in your mind as to your condition, take from your urine on rising about four ounces, place it in a glass or bottle and let it stand twenty-four hours. If on examination it is milky or cloudy, if there is a brick-dust settling, or if small particles float about in it, your kidneys are in need of immediate attention.

Swamp-Root is pleasant to take and is used in the leading hospitals, recommended by physicians in their private practice, and is taken by doctors themselves who have kidney ailments, because they recognize in it the greatest and most successful remedy for kidney, liver and bladder troubles.

If you are already convinced that this great remedy, Swamp-Root, is what you need, you can purchase the regular fifty-cent and one-dollar size bottles at the drug-stores everywhere. Don't make any mistake, but remember the name, Swamp-Root, Dr. Kilmer's Swamp-Root, and the address, Binghamton, N. Y., on every bottle.

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Girls can get this beautiful Life Size Doll absolutely Free for selling only four boxes of our Great Cold & Headache Tablets at 25 cents a box. Write to-day and we will send you the tablets by mail postpaid; when sold send us the money ($1.00) and we will send you this Life Size Doll which is 2½ feet high and can wear baby's clothes. Dollie has an Indestructible Head, Golden Hair, Rosy Cheeks, Brown Eyes, Kid Colored Body, a Gold Plated Beauty Pin, Red Stockings, Black Shoes, and will stand alone. This doll is an exact reproduction of the finest hand painted French Doll, and will live in a child's memory long after childhood days have passed. Address,
NATIONAL MEDICINE CO., Doll Dept. 16 D, New Haven, Conn

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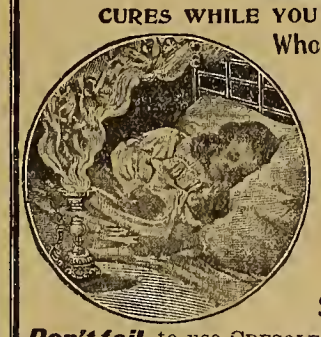
CURES WHILE YOU SLEEP



Whooping Cough, Croup, Bronchitis, Coughs, Grip, Hay Fever, Diphtheria, Scarlet Fever,

Don't fail to use CRESOLENE for the distressing and often fatal affections for which it is recommended. For more than twenty years we have had the most conclusive assurances that there is nothing better. Ask your physician about it.

An interesting descriptive booklet is sent free, which gives the highest testimonials as to its value.

ALL DRUGGISTS.

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This is the only Elastic Truss made under Patents and Trade-mark issued by United States government.

Two New Patents Just Issued

This truss is worn night and day with comfort, and is warranted to hold the worst case of Rupture steadily during the most laborious exercise. The front piece fitted with new patented

WIRE-FRAME BRACE

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Mr. Hugo Horn, 344 E. 65th St., New York City, writes: "It reduced my weight 40 lbs. three years ago, and I have not gained an ounce since." Purely vegetable, and harmless as water. Any one can make it at home at little expense. No starving. No sickness. We will mail a box of it and full particulars in a plain sealed package for 4 cents for postage, etc.

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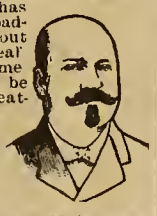
DEAFNESS AND HEAD-NOISES CURED AT HOME. SMALL EXPENSE.



Dr. W. O. Coffee, Des Moines, Iowa, has just published a book on "Deafness, Head-Noises, Causes and Cure." It tells all about the ears and how he cured himself of Deafness with his wonderful Absorption Remedies. Ninety per cent of deafness can be helped or cured by the Absorption treatment. Incurable cases not taken.

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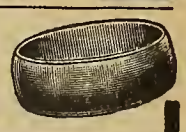

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With it I will send an order on your nearest druggist for six bottles of Dr. Shoop's Restorative. If you think that you need it after reading this book you are welcome to take it a month at my risk. If it cures pay your druggist $5.50. If it fails I will pay him myself.

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Book No. 5 for Men (sealed)
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Mild cases, not chronic, are often cured by one or two bottles. At all druggists.

Registered in U. S. Patent Office Sept. 24, 1901.

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Any one can earn Dolls, Bracelets, Rings and other Valuable Premiums. This is a beautiful Imported dressed Doll nearly two feet tall, a perfect beauty imported direct from Europe. This lovely doll has a beautiful turning bisque head, pearly teeth, long golden hair, natural sleeping eyes, jointed body, real slippers, stockings, etc., by introducing our latest Parisian Novelties, ladies' and misses' belt pins, hair barrettes, beauty pins, etc., at ten cents per card. **Our Grand 30 day Proposition** which is apart from above, send us your full name & address & we will send you 15 cards of our latest Parisian Novelties postpaid. You sell at ten cents per card and return us $1.50, we will send you (all charges prepaid) a beautiful Imported French Doll also a gold finished ring.

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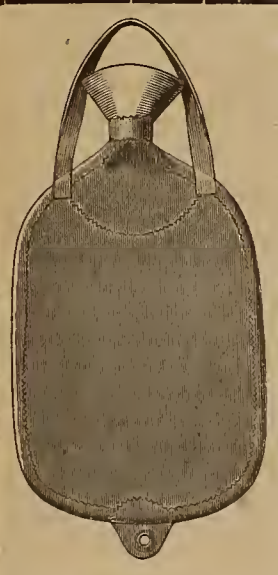

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This hot-water bottle is of the well-known Goodyear make, so that the quality is absolutely guaranteed. Not only this, but it is

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being a three-quart bottle, and not the two-quart size commonly offered. Sent by mail, postage paid by us. Order as **No. 274.**

We Will Send This Hot-Water Bottle FREE for Sending SIX Yearly Subscriptions, New or Renewal, to the Farm and Fireside; or,

We Will Send the Farm and Fireside One Year, New or Renewal, and This Large Hot-Water Bottle for $1.00.

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SELECTIONS

Laundry-soap

Cheapness being a requirement in a staple and much-used article like laundry-soap, manufacturers endeavor to utilize the cheapest oils or fats, and the kettles for boiling and other appliances needed in conducting the operation of soap-making are devised with a view to securing all possible economy in fuel and labor.

A good, common hard soap may be made from clean tallow or lard and caustic soda without any very special skill in manipulation. The caustic soda indicated is a crude article, which may now be obtained from druggists in quantities to suit at a very moderate price. A lye of average strength is made by dissolving it in water in the proportion of about two pounds to the gallon. For the saponification of lard a given quantity of the grease is melted at a low heat, and one fourth its weight of the lye is then added in small portions with constant stirring; when incorporation has been thoroughly effected another portion of lye equal to the first is added as before, and the mixture kept at a gentle heat until saponification appears to be complete. If the soap does not readily separate from the liquid more lye should be added, the soap being insoluble in strong lye. When separation has occurred, pour off the lye, add water to the mass, heat until dissolved, and again separate by the use of more strong lye or a strong solution of common salt. The latter part of the process is designed to purify the soap, and may be omitted where only a cruder article is required. The soap is finally remelted in a water-bath, kept at a gentle heat until as much water as possible is expelled, and then poured into frames or molds to set.

Laundry-soaps are frequently cheapened by the addition of a considerable proportion of resin in the process of manufacture. Such a soap may be made in the following manner: Place two thousand pounds of tallow and about six hundred pounds of resin in the soap-kettle, and run in from one hundred and fifty to one hundred and seventy-five gallons of soda-lye of ten degrees to twenty degrees Baume strength; apply heat, and boil for about two or three hours, with constant stirring. Then withdraw the heat, and after six hours draw off the spent lye, add a supply of fresh lye, and again boil for three hours; allow to stand, draw off the spent lye, and repeat the operation until a sample of the soap pressed between the fingers divides into hard flakes. If the sample is satisfactory boil briskly for a short while, withdraw the heat and throw in a few pailfuls of cold water; allow to stand about two hours, draw off the lye, add six or eight pailfuls of water, stir it in, and boil briskly. If the soap does not then separate from the water add about a gallon or two of strong solution of salt. Allow the soap to stand until it separates out, and then ladle into frames.—The Druggists' Circular.

Why the Chinese Distrust Foreigners

There are many men of high character engaged in business in the great cities of China. I would not speak any disparaging word of those who are worthy of all respect, but I am giving the concensus of opinion expressed to me by reputable laymen who have traveled widely in the East, and not reporting the utterances of missionaries, when I say in the words of another that many Americans and Europeans doing business in Asia are "living the life of the prodigal son who has not yet come to himself." Profane, intemperate, immoral, not living among the Chinese, but segregating themselves in foreign communities in the treaty ports, not speaking the Chinese language, frequently beating and cursing those who are in their employ, regarding the Chinese with hatred and contempt—it is no wonder that they are hated in return and that their conduct has done much to justify Chinese distrust of the foreigners.—Arthur J. Brown, in the Great Round World.

Malay Character

Mr. Colquhoun, in his new book on "The Mastery of the Pacific," doubts very strongly the success of the education we are going to give to the Filipinos, and bases his doubt upon the characteristics and possibilities of the Malays as revealed hitherto in their relations with Europeans.

The Malay has undoubted charm. He is bright, hospitable, has a certain tenderness of heart, and possesses in general the fundamental traits that make the gentleman the world over. He is easy to rule so long as he recognizes his master; is brave, but superstitious. He also has in fullest measure the defects of his qualities.

Experience has taught one thing—he degenerates when brought under the influence of Western civilization, losing some of his primitive virtues, and failing to acquire others that require the exercise of reason and discipline. In his analysis of the Malay character Mr. Colquhoun says:

"Other deficiencies in their mental and moral equipment are a lack of organizing power. No Malay nation has ever emerged from the hordes of that race which have spread over the islands of the Pacific. Wherever they are found they have certain marked characteristics, and of these the most remarkable is their lack of that spirit which goes to form a homogeneous people, to weld them together. The Malay is always a provincial; more, he rarely rises outside the interest of his own town or village. He is never honest as we count that virtue, never truthful, and never industrious or persevering. This is his dark side, but it is with that we are concerned. The two points which are most inimical to progress are, as already indicated, the lack of unity and the lack of persistence. The Malay is the laziest of Orientals, and the Filipino is not the least lazy of Malays. The Malay, in short, is a creature of limitations."

Music of Shakespeare's Time

Of the lighter kinds of secular music the catch was the most popular, and we find many allusions to it in Shakespeare's plays.

In the catch proper there was some trick or catch in the words, as in that famous one of Calcott's, where the first voice sings, "Ah, how Sophia," and the next "catches" this with the phrase "A house a-fire," which in the rapid pronunciation of that time would sound much like "Ah, how Sophia."

The round, however, is often confounded with the catch; musically they do not differ, both the round and the catch being varieties of the "canon in the unison" illustrated by the upper parts of the "Cuckoo Song."

When I was a boy we used to sing a very familiar round, which began, "Scotland's burning, Scotland's burning, fire, fire, fire, fire, cast on water, cast on water," etc.

It is interesting to find among the rounds and catches of Shakespeare's time some early forms of the nursery rimes which appear in our "Mother Goose." For example, in Act IV., Scene I., of "Taming of the Shrew," where Grumio has been sent ahead to Petruchio's country house to make a fire before he and his bride arrive; presently Petruchio's other servant, Curtis, comes in, and, the fire being built, calls out to Grumio, "There's fire ready; and therefore, good Grumio, the news?"

"Why," says Grumio, "Jack boy! ho boy! and as much news as thou wilt."

This "Jack boy, ho boy" is unintelligible until you know that these are the first words of a popular catch in Shakespeare's time, which ran thus:

"Jack boy, ho boy—news!
The cat is in the well;
Let us ring now for her knell.
Ding, ding, dong, bell!"

—Sidney Lanier, in Lippincott's Magazine.

A Sharp Bug

One morning a lady noticed a hornet on the window of her parlor. She started to drive out the uuwelcome visitor, but was called away for a few minutes, and the hornet was forgotten. Soon little Elmer ran into the room to look at a passing parade. He did not see the hornet, and leaned his forehead directly upon it; whereupon it retaliated in the usual way. With shrieks and a rapidly swelling forehead he ran to his mother, crying, "Oh, mama, I hurt myself on a bug!"—The Little Chronicle.

He who could not sit
And sing contented in a desert isle,
His audience the mute trees and wandering winds,
His joy the grace and beauty of his song,
Should never lift his voice 'mong mortal men.
—Alexander Smith.

BATTLE CREEK'S GREAT HEALERS

A Body of Battle Creek's Most Famous Physicians Have Perfected a System of Treatment that is Startling the World and Curing Thousands Formerly Pronounced Incurable.

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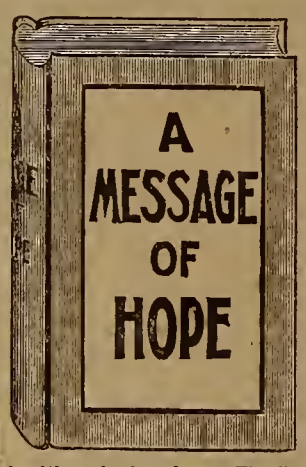

The accompanying cut is of a book written by Dr. J. M. Peebles, the great lecturer, author and physician, of Battle Creek, Mich., who has perfected a system of treatment that promises to banish disease and suffering. The Doctor claims that disease is abnormal and can be positively banished from the world. At the age of 81 he is as hale, hearty and vigorous as most men of 30, and he says that any one can command their faculties and health as he has done. The Doctor has written this book for the sole purpose of revealing to sufferers the wonderful system of treatment which he has originated, and you will find in it knowledge that will be of great value to you. It gives you the key to perfect health and happiness. Among the thousands of cases cured by this wonderful system of treatment are the paralytic, the blind and the deaf; also those suffering from Bright's disease, consumption, catarrh, stomach and bowel troubles, nervous debility, rheumatism, heart disease, female troubles, fits, neuralgia, bladder trouble, dropsy, eczema, blood disorders, piles, asthma, in fact all chronic troubles. So sure is the Doctor that his treatment will cure all chronic diseases that he has instructed the Institute of which he is president to give every reader of the Farm and Fireside who is in poor health a ten days' treatment free, postage paid, in order to demonstrate to them that health is within their grasp. Write at once, addressing Dr. Peebles' Institute of Health, Battle Creek, Mich., Drawer N 7, stating your troubles, that they may prepare a special treatment to fit your exact condition. They will also send you their book "A Message of Hope," explaining fully their grand system of treatment, and a full diagnosis of your case, with their professional advice.

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Farmers' Sons Wanted—with knowledge of farm stock and fair education to work in an office; $60 a month with advancement; steady employment; must be honest and reliable. Branch offices of the association are being established in each state. Apply at once, giving full particulars. The Veterinary Science Ass'n. London. Canada.

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WARREN J. LYNCH, Gen'l Pass. & Ticket Agt. W. P. DEPPE, Asst. G. P. & T. A.
CINCINNATI, OHIO

Lo, the Poor Hindu

The poor, benighted Hindu,
He does the best he kindo;
He sticks to his caste from first to last,
And for pants he makes his skindo.
—Fayette (W. Va.) Journal.

Unintentional Sarcasm

POLITENESS, it is true, must have its origin in a kind heart and a desire to please; but tact and thoughtfulness and quick wit are also essential to good manners.

A very stout hostess, who was entertaining a large company one evening, turned to a group of young men standing near her chair, and smilingly asked, "May I trouble one of you young gentlemen for a glass of water from the pitcher on the table?"

Several of the young men hurried to comply with the request. One who was particularly active succeeded in reaching the table first.

As he handed the glass of water to the hostess she complimented him on his quickness.

"Oh, that's nothing," he said. "I am used to it. I got into many a circus and menagerie when I was a boy by carrying water for the elephant."—Youth's Companion.

Intention Was Good

A careless young woman in starting to leave a car dropped her purse. A young man, who evidently intended to leave the car at the same time, saw her drop her purse, picked it up, and put it into his pocket.

But his action had not been unnoticed. Just as he stepped from the car an elderly man gripped him by the arm, and whispered, "If you don't give that purse to the young lady this instant I'll expose you."

"Yes, certainly!" gasped the astonished young man. Then, with a grin, "I beg pardon, Elizabeth; you dropped your purse."

"Oh, thank you, Jim," she replied, as she took it.

"I hope you are satisfied," said Jim, turning to the elderly man. "The lady is my sister."—Forward.

The Right Way

The value of a receipt lies partly in its being accurately set down and followed. "Harper's Magazine" has the following directions for making a breakfast delicacy called pop-overs as they were imparted by the Chinese servant to a lady visiting in the family:

"You takee him one egg," said the master of the kitchen, "one lit' cup milk. You fixee him one cup flou' on sieve; take pinch salt—you not put him in lump. You move him egg lit' bit slow; you put him milk in, all the time move. You makee him flou' go in, not move fast, so have no spots. Makee butied pan all same wa'm, not too hot. Putlee him in oven. Now you mind you business. No like woman run look at him all time. Him done all same time biscuit."

A Veteran Kicker

They're telling a heavenly story which they say no more than does justice to the "kicking" propensities of the Togus veteran.

The old soldier dies, so the story goes, and after death he marches up to the gates of heaven. He hits the door a thump, and St. Peter peers out through the wicket.

"Who are you?" asks the saint.

"I'm an old soldier."

"Where from?"

"Soldiers' Home at Togus."

"Well, you may come in," says the saint, "but I don't know as the place'll suit you."—Kennebec Journal.

Only a Mistake

Father Monsabre, the famous preacher of Notre Dame, Paris, whose fiftieth anniversary as priest has lately been celebrated, is known for his wit and humor. The "Gaulois" tells the following anecdote of him: One day, at a most inconvenient moment, just as he was preparing to enter the pulpit, a lady came to him, and with many airs and graces told him that her conscience troubled her greatly because she had that morning admired herself in the looking-glass more than usual, thinking how very pretty she was. Whereupon he answered, "Go in peace, my child; a mistake is not a sin."—Short Stories.

Not His Intention

The guns were popping away among the pheasants, and a Scottish gamekeeper with a very light bag was shadowing a young blood who blazed away at everything, but hit nothing. Presently the latter aimed his gun at a pheasant that was running along the ground.

"Hoots, mon!" interposed the gamekeeper, in horror. "Ye must na shoot th' bird a-runnin'!"

To which the undaunted sportsman replied, "No, man, I don't intend to. I'm waiting for the beggar to stop."—London Answers.

Which?

"Poor George! He was shot by another American."

"Philippines or Adirondacks?"—Life.

A Smart Salesman

"Did you sell anything while I was out, Johnny?" asked the jeweler of the new boy.

"Yes, sir. I sold six plain gold rings."

"Good, my boy," said the jeweler, highly pleased. "We'll make a first-class salesman of you one of these days. You got the regular price, of course?"

"Oh, yes, sir. The price was marked on the inside, 18c., and the gentleman took all that was left, sir."—Life.

His Choice

"You said you were hungry," remarked the kind-hearted woman, reproachfully, "and yet when I gave you twenty-five cents a little while ago you went to a saloon instead of a restaurant."

"Yes'm," admitted the hobo. "You see, it's this here way. I was hungry and thirsty, and twenty-five cents' worth of whisky'll make me fergit I'm hungry, but twenty-five cents' worth of grub won't make me fergit I'm thirsty."—Chicago Post.

Bound by Honor

Weary Walker—"No, ma'am; I ain't dirty from choice. I'm bound by honor. I wrote a testimonial fer a soap-maker onct, an' promised 'to use no udder.'"

Mrs. Houskeep—"Well, why do you not use that?"

Weary Walker—"Because, ma'am, dat firm failed jist after de Civil War."—Catholic Standard and Times.

Source of Fertility

"This article," said the magazine editor, handing it back, "will hardly do. Pardon me for saying it, but you don't seem to have any fertility of imagination."

"If I haven't," responded the indignant contributor, "it isn't for lack of fertilizing material; I have read all the recent fiction."—Chicago Tribune.

A New Brand of Coffee

Little five-year-old Lois Durand was sent one morning to buy some Java and Mocha coffee for her mother. By the time she had reached the store she had forgotten the name of the coffee she was to order, so when the storekeeper asked her what kind of coffee she wanted she said:

"I forget, but I think it was Jamica and Jehovah mixed."—The Little Chronicle.

Quite a Model

Mother—"I don't like the looks of that boy I saw you playing with on the street to-day. You must not play with bad little boys, you know!"

Son—"Oh, he ain't a bad little boy, mama! He's a 'good' little boy. He's been to the reform school two times, and they've let him out each time on account of good behavior."—Puck.

His Reason

"What have you ever done to deserve the office to which you aspire?" asked the voter.

"Nothing," answered the candidate, frankly. "If I had ever done anything to thoroughly qualify myself for so important a position I could probably make a great deal more money as a private citizen."—Washington Star.

Stepping High

"John, when you came home last night you talked and acted very queerly. You were lifting your feet and endeavoring to step over imaginary obstacles."

"Oh! Yes, my dear. All the evening I felt as if I were walking on clouds. You remember we had angel-cake for supper."—Yonkers Statesman.

Might Have Prevented It

Little Walter was eating lunch, when he gave his arm a sudden shove, and down went his glass of milk.

"I knew you were going to spill that," said mama, angrily.

"Well, if you knew," queried Walter, "why didn't you tell me?"—The Little Chronicle.

In the South

"Den de committee wanted me to go up to de polls an' offer to vote, so dey end make a test case of dis hyah disfranchisin' law."

"A test case?"

"Yes. But I wouldn't go, 'case I was skeered it mought turn out to be a coroner's case."—Puck.

A Shock

Casey—"Wasn't ye shocked an' pained to hear av Clancy's sudden death?"

Costigan—"Indade an' Ol was! He owed me thirty-five cints."—Judge.

One Better

Ida—"But Belle always said Harry was 'one man in a million.' Why did she jilt him?"

May—"Oh, she found one man with a million."—Chicago News.

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DR. JAMES WILLIAM KIDD

himself, produced as a result of the years he has spent in searching for this precious life-giving boon, to cure any and every disease that is known to the human body. There is no doubt of the doctor's earnestness in making his claim, and the remarkable cures that he is daily effecting seem to bear him out very strongly. His theory which he advances is one of reason and based on sound experience in a medical practice of many years. It costs nothing to try his remarkable "Elixir of Life," as he calls it, for he sends it free to any one who is a sufferer in sufficient quantities to convince of its ability to cure, so there is absolutely no risk to run. Some of the cures cited are very remarkable, and but for reliable witnesses would hardly be credited. The lame have thrown away crutches and walked about after two or three trials of the remedy. The sick, given up by home doctors, have been restored to their families and friends in perfect health. Rheumatism, neuralgia, stomach, heart, liver, kidney, blood and skin diseases and bladder troubles disappear as by magic. Headaches, backaches, nervousness, fevers, consumption, coughs, colds, asthma, catarrh, bronchitis and all affections of the throat, lungs or any vital organs are easily overcome in a space of time that is simply marvelous.

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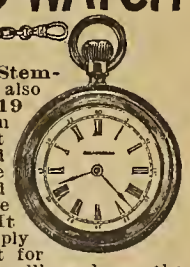

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FARM SELECTIONS

Individual Differences in the Value of Dairy-cows

THE figures which we have obtained and published from time to time in the "Dairyman" in connection with the several cow censuses have been so startling that not a few of our readers have, perhaps, thought them more or less unreliable. We are free to admit that it seems almost incredible that two men residing, perhaps, on adjoining farms, sending their milk to the same creamery, receiving absolutely the same price for the product, should come out at the end of the year, one with a profit of nearly thirty dollars a cow, and the other, perchance, with less than thirty cents.

We have contended that there was a very material difference in cows, and that if a man subjected himself to all forms of dairy expense he ought, in all reason, to provide himself with dairy-cows. We are firmly persuaded that in this matter we have had not only the best of the argument, but the facts wherever they have been obtained support our contention in this behalf. Yet there are a good many teachers and others who insist upon it that the specific dairy-cow is not a necessity to the dairy-farmer, but that there is a so-called general-purpose cow which is her superior for the farmer, especially if he is devoting himself to what they are pleased to call general farming.

Now, if there is a general farmer on the face of the earth, that man is the dairyman; for if he is a true dairyman he not only keeps cows for profit, but he must necessarily till the land to produce the crops to feed these cows. In order to do this to the best advantage and with the greatest profit he must produce a rotation. He should grow corn, legumes, grain and various other crops, but instead of hauling them off in their crude state to a distant market, involving large expense and very sensibly depleting the fertility of his farm, he makes his market at home and sells the product of his acres to his cows, and they furnish him raw material, which he manufactures into butter or cheese. Thus, as we said, if there is a general farmer on the face of the earth, it is the dairy-farmer.

We have been led into these reflections by a perusal of Bulletin No. 66 from the Illinois Agricultural Experiment Station, wherein is recorded in detail the results with two cows for a period of twelve months. They were grade cows of no known breeding, one nine years old and the other six years old, and neither of them of the strictly beef-type. These cows were all fed throughout the year as near alike as it was possible with their varying appetites, and there was a very slight difference—less than three hundred pounds—in the total amount of nutrients consumed by each. Yet one of these cows produced 564.82 pounds of butter-fat, and the other produced 298.64 pounds; or, reduced to a like feed basis, for every one hundred pounds of milk given by one cow the other gave 139.5 pounds, and for every one hundred pounds of butter-fat produced by the former the latter produced 180.7.

It may be said, of course, that both of these cows were good cows; that no cow capable of producing 298.64 pounds should be condemned. But if it is possible, by keeping records and making selections, to place another cow in her stead capable of producing eighty per cent more butter-fat on the same amount of feed, should not the dairyman make diligent effort to provide himself with cows of the latter class?

To aid the dairyman in effecting this the bulletin concludes with the following:

"There are vast differences in the efficiency and profit derived from dairy-cows.

"One cow may produce more than twice as much butter-fat in a year as another on exactly the same feed basis.

"A good cow, well cared for, may produce five times as much as the average cow in the United States, or nearly as much as three 'profitable' cows for Illinois.

"Nearly all dairymen are keeping a portion of their herd at an actual loss.

"Many keep cows that pay only half as much a bushel for the grain consumed as other cows in the same herd.

"Excellent cows are obtainable at a reasonable price in nearly all sections of the country.

"Give the cows a one-week test every three months; have a profitable standard; gradually raise it each year, and dispose of any cows that do not come up to this.

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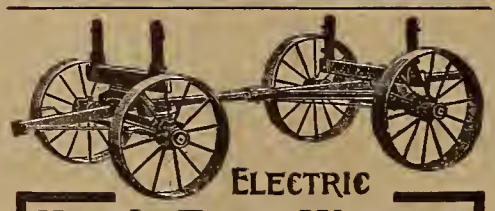

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FARM SELECTIONS

Danger in the Seed-corn

The quality of the seed-corn from ordinary corn-cribs examined by the Illinois Experiment Station shows that the vitality of much of the corn is so weak that it should not be planted under any circumstances whatever. So very great has been the injury done by the low temperatures upon corn not thoroughly matured and dried that it has given rise to considerable alarm among the farmers as to the condition of their supply of seed-corn for the coming season. The vitality of the seed-corn is of tremendous importance to the corn-growers, because no matter how favorable the season or how rich the soil, seed-corn of poor vitality will produce a poor stand and result in a small yield.

The corn in the ordinary cribs of the Sibley farms, from which seed was to have been selected, was found to be injured so much that none of it would grow upon being tested in the germinators. All of such seed was discarded at once, and a most careful examination made of the seed to be used on the farms the coming season. The result of this examination is that although the corn selected from the ordinary cribs looks bright and vigorous, it is found upon testing that the sprout has been killed, and the seed will not grow. The advanced class in farm crops has tested over two hundred samples sent to the College of Agriculture, University of Illinois, by Illinois farmers. It has been found that the fire-dried corn is the most vigorous. Most of the corn selected from ordinary cribs is unreliable, especially where the corn did not fully mature last season. The corn which was allowed to stand in shock was entirely killed, and much old seed-corn cannot be relied upon.

This damage was likely done by the short, unfavorable season, not allowing much of the corn to fully mature, and the severe cold spells of the winter season. If the seed-corn is thoroughly dry no ordinary amount of cold can injure it. However, where there was a little moisture in the kernels or cob the temperature of from eighteen degrees Fahrenheit to twenty degrees Fahrenheit below zero killed or weakened the vitality of the seed.

To test seed-corn select from different parts of the supply of corn one hundred ears of average size and appearance. Take out one kernel for testing from near the middle of each ear, making one hundred kernels in all. If the seed-corn is shelled, pick out from different parts of the bin one hundred kernels. Fill an ordinary china dinner-plate with sand, and pour water on the sand until it runs off the plate. Shake the sand down firm and level in the plate and run off the extra water not retained by the sand. Stick the kernels selected for testing point down in the sand, one hundred kernels to the plate. Sprinkle a little dry sand over the wet sand, turn a second smaller plate over the first, to prevent the too rapid evaporation of moisture, and set in a warm place—under the stove or in a warm room. The temperature of the ordinary living-room is warm enough to sprout the seed. Keep a record of the number that sprout in the following form:

	No. Seeds Sprouted	No. Seeds Not Sprouted	Per Cent of Seeds Sprouted	Temperature of Air Where Plate Stands
Examination after 1 day.....				
Examination after 2 days				
Examination after 4 days				
Examination after 6 days.....				
Examination after 8 days				
Examination after 10 days....				

If the sand becomes dry, sprinkle warm water (not too hot to hold the hand in) over it until the sand is thoroughly moistened.

Wait until the kernels are pushed out of the sand by the young plants. Do not dig them up until at the end of ten days.

Use as fine sand as can be procured. It will hold the moisture longer than coarse sand, hence will furnish more favorable conditions for germination.

At the end of six days ninety-five per cent out of the tested kernels should have sprouted. If five per cent of the kernels fail to sprout it indicates poor vitality. Such seed should not be planted, as the result will be weak plants, an uneven stand and a poor yield.—A. D. Shamel, in the Breeders' Gazette.

Extermination of Gophers

The best of the poisons tried proved to be strychnine. The first few attempts with it, however, were not at all satisfactory. The partial failure was decided to be due to two causes—the inability to administer the poison in a sufficiently concentrated form, and the extreme bitterness of the strychnine, which prevented the animals taking the poisoned grain in any large quantity. The habits of the animal must be considered if the results are to be satisfactory. The gophers are great providers for the future. They probably eat at the time only a very small portion of the grain, roots, etc., which they collect.. It follows, therefore, that in order to accomplish the desired result it is necessary to have the poisoned grain sufficiently saturated with the death-dealing agent so that a very small portion will be effective.

Strychnine is only very slightly soluble, even in hot water, only about thirty grains dissolving in one gallon. It is readily soluble, however, in acidulated water. The acid most easily within the reach of the farmer or gardener is acetic acid in the form of vinegar. One pint of strong vinegar when heated to boiling will readily dissolve one and one half ounces of strychnine. The masking of the bitterness of the poison, which, as has been said, is highly desirable, may be partially accomplished by the use of sugar-syrup and a small amount of the oil of anise. Owing to its spicy odor the latter is very attractive to mice, rats, squirrels, etc.

The method or formula that we have worked out is as follows: One half ounce of strychnine is added to one pint of hot vinegar—more if the vinegar is of poor grade—and after the strychnine has all dissolved the vinegar solution is mixed with three quarts of water. In this solution ten pounds of wheat are soaked for eighteen or twenty hours, by which time the solution will be entirely absorbed by the grain. The wheat is then spread in the sun to dry. Frequent and vigorous stirring is necessary while the wheat is soaking, in order that the grain may be uniformly saturated with the poison. If properly prepared according to this formula each kernel of grain will contain a fatal dose for one gopher.

Next dissolve three pounds of sugar in one gallon of water, and boil down to one half gallon. This gives a good, thick syrup. When cold stir in one teaspoonful of oil of anise. When the poisoned wheat is dry, or nearly so, the syrup is poured over it and thoroughly stirred until each grain of wheat is more or less covered with a coating of the syrup. It is then thoroughly dried. We now have a highly poisoned, sugar-coated, and from its agreeable odor, very attractive product for the animals we wish to kill. A few grains—one fourth to one half teaspoonful—are buried near each burrow, and in a day or two the buzzards, which will collect to dispose of the dead, will be witnesses to the effect.

A word of caution, however, is probably necessary. Wheat so poisoned is a dangerous preparation, and should be kept out of the reach of fowls and animals. It should be labeled poison and put in some place where there is no possible danger of its being used for any other purpose than that for which it is intended. When using, it is advisable to bury it, to prevent the destruction of useful birds.—Bulletin of the Arizona Experiment Station.

Raising Calves

If we did not have milk for calves until they are three or four months old we would not undertake to raise calves in competition with the fellow who has. There are limits to the calf-raising problem, and we state them as we see them.

If you expect to grow a calf worth feeding with corn or other valuable feed, let it have the full milk until it is ten days old, then gradually change it over in the next ten days to separated milk, fed warm and sweet, with some ground oats, or, better still, ground flaxseed, to be fed after the calf is through drinking. For the next thirty days give it corn-meal and oats with its milk, and after it is sixty days old give it skim-milk and shelled corn.—Wallaces' Farmer.

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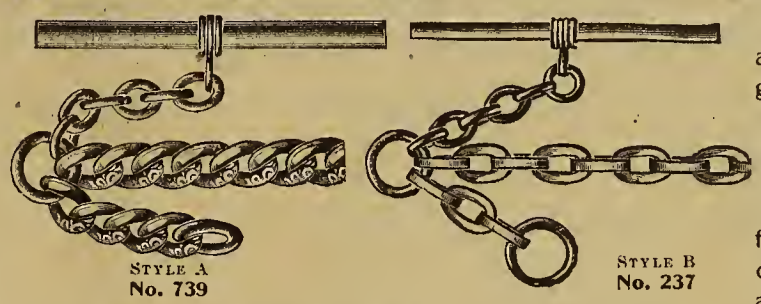
They Can't Fail to Please You, Too. This adv. will not appear again. Writa at once.

Handsome Gold Watch-Chains



Style A
No. 739

Style B
No. 237

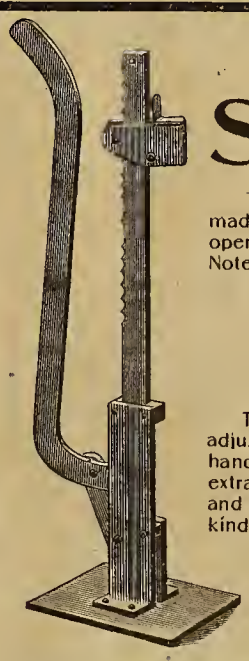
These chains are full size, gold filled and warranted for five years. A good gold filled watch-chain means an outlay of considerable money when purchased of any retail jeweler. These chains are just the same as those you would find at any first-class jeweler's in any part of the country. You may order either chain you wish of these styles. Style A is known as the curb; Style B is the opened Boston link. The chains are each twelve inches long. Sent by mail, postage paid by us. For Style A order as **No. 739**; for Style B order as **No. 237.**

We Will Send Either of These Chains FREE for Sending SIX Yearly Subscriptions, New or Renewal, to the Farm and Fireside; or

We Will Send the Farm and Fireside One Year, New or Renewal, and Either Chain for $1.00

(To Club-Raisers:—When the subscriber pays you this special price you are entitled either to the regular cash commission or to count the name in a club)

ADDRESS FARM AND FIRESIDE, SPRINGFIELD, OHIO



BULL-STRONG

Steel Wagon-Jack

The finest, strongest, easiest-operated wagon or carriage jack ever made. It is a wonder for lifting power, and at the same time it can be operated easily by a child. Nothing to equal it has ever been invented. Note these good points.

NO CAST METAL NO WOOD
ALL WROUGHT-STEEL
ADJUSTED IN AN INSTANT

There is absolutely no other wagon-jack that has such perfect adjustment combined with such matchless strength. The weight of your hand will lift a heavy wagon like a feather. You do not need to put extra pressure on in starting to lift with this jack. It works smoothly and easily from the start. The jack is extremely useful also for all kinds of lifting about

The HOUSE, the BARN, the WORKSHOP or the STORE

It is an invaluable article for every household The jack takes up a ground space only 5 by 6 inches. It is sent by express, charges paid by the receiver. Order as **No. 716.**

1 We will send this Jack FREE for sending only four yearly subscriptions, new or renewal, to the Farm and Fireside; or

2 We will send the Farm and Fireside one year, new or renewal, and this Jack for only . . . . . **85 Cents**

(To Club-Raisers:—When the subscriber pays you this special price you are entitled either to the regular cash commission or to count the name in a club)

ADDRESS FARM AND FIRESIDE, SPRINGFIELD, OHIO

New Plant Collections

Either 5 Rose-Plants or 4 Geranium-Plants or 6 Carnation-Plants or 6 Chrysanthemum-Plants Given for TWO Yearly Subscriptions to the Farm and Fireside.

Either Collection, and Farm and Fireside One Year, for **40c.**

(When this offer is accepted no cash commission can be allowed, and the name cannot count in a club toward a premium)

Five Ever-Blooming ROSE Plants

The rose is one of the grandest of all flowers, and the collection of thrifty plants we here offer includes some of the very finest specimens. Principal among the roses in the collection is

THE MAGNIFICENT CLIMBING METEOR—A Grand New Velvety Red Rose

The brightest-colored of all Roses. It has been called a Perpetual-Blooming, Climbing General Jacqueminot

Climbing Meteor is the acme of all red climbing Roses. It is a free, persistent bloomer, and will make a growth of from ten to fifteen feet in a season; in bloom all the time, as it is a true ever-bloomer. We do not hesitate to place it at the head of the list of all Roses for summer blooming, as it will make a strong growth and is literally loaded with its deep, rich red flowers all the time. Its flowers are much larger than the standard Meteor. It is just the Rose to train up the veranda or around windows, where its great beauty will show up to good advantage.

THE COLLECTION OF 5 ROSES INCLUDES ALL OF THE FOLLOWING COLORS:

One Climbing Meteor as described above, one clear bright rosy red, one bright pink, one pure white, and one rich flesh-colored. All will bloom freely during the coming season.

Order this Rose Collection as No. 725.

Flower of Climbing Meteor—Actual Size

4 Beautiful GERANIUM Plants

The Geranium is among the most popular of all plants both for potting or bedding. More than this, they are exceedingly easy to grow and are free from insects. Collection here offered includes the latest and best varieties of this popular flower. They are unusually fine year-old plants, and with proper care are sure to grow. **Order Geranium Collection as No. 290.**

FOUR DIFFERENT COLORS, AS FOLLOWS:

One pure snow-white, one brilliant crimson-scarlet, one nankeen-salmon, one beautiful pink.

Postage on the plants paid by us in each case.

Particular Notice

Collections must be ordered entire. We cannot send part of one and part of another to make up one collection.

ORDER NOW.—Do not wait until you are ready to plant. If you do not want your plants until some later date, we will have them reserved and shipped when desired. When you order state the time you wish the plants sent.

6 Fragrant CARNATION Plants

Carnations are the delight of every one who has an eye for the beautiful in flowers. Being unrivaled in their rich and refreshing fragrance, unequaled for diversity of colors, unapproached for daintiness and beauty of outline, it is not to be wondered at that next to the rose they have become the favorite flower among all classes. The collection we offer contains a fine variety of these exquisite plants. **Order Carnation Collection as No. 534.**

SIX DIFFERENT COLORS, AS FOLLOWS:

One yellow, one deep crimson, one rich scarlet, one white, one light pink striped with a darker shade, one bright clear pink.

6 Japanese CHRYSANTHEMUM Plants

The collection here offered is made up of large, double-flowering Japanese Chrysanthemums, the direct offshoots of prize-winning varieties. This collection embraces all colors known to the Chrysanthemum family, and all shapes and forms, as incurved, recurved, twisted, whorled, ostrich-plumes, etc., also early and late bloomers. They are well-rooted plants and sure to grow. **Order Chrysanthemum Collection as No. 558.**

SIX DIFFERENT COLORS, AS FOLLOWS:

One deep golden yellow, one rose-pink with soft satin finish, one fiery red, one velvet rose with silky texture, one pure ivory-white, and one creamy-white showing a tinge of pink.

CULTURAL DIRECTIONS.—Accompanying each lot of plants there are full directions for planting, care, etc., in order that the best results may be obtained.

GUARANTEE.—All of the plants will be large, healthy and well rooted, and will bloom the coming season. We gaarantee them to be exactly as described, to arrive in perfect condition, and to give entire satisfaction or yoar money cheerfully refunded.

We will send EITHER the collection of 5 Rose-Plants or 4 Geranium-Plants or 6 Carnation-Plants or 6 Chrysanthemum-Plants, and the Farm and Fireside One Year, for 40c.

(When this offer is accepted no cash commission can be allowed, and the name cannot count in a club toward a premium)

Free We will send either the collection of 5 Rose-Plants or 4 Geranium-Plants or 6 Carnation-Plants or 6 Chrysanthemum-Plants FREE for TWO yearly subscriptions to the Farm and Fireside; or any two collections for FOUR subscriptions; or any three collections for SIX subscriptions, and so on.

Flower of Geranium-Plant—Actual Size

ADDRESS FARM AND FIRESIDE, SPRINGFIELD, OHIO

I Sell Farms

RESIDENCES, STORES, AND OTHER REAL ESTATE
NO MATTER WHERE LOCATED.

IF YOU WANT TO BUY OR SELL a farm, store, lot, house, or any real estate anywhere in the United States or Canada, send and get (absolutely free) my marvellously successful plan. If you want to sell, send description and cash price. If you want to buy, tell me what you want. Don't miss this chance. Write at once.

W. M. OSTRANDER, 1404 North American Building, PHILADELPHIA.

FINE NEW PATTERNS

These patterns retail in fashion bazaars and stores for twenty-five to forty cents each, but in order to increase the demand for our paper among strangers, and to make it more valuable than ever to our old friends, we offer them to the lady readers of our paper for the low price of only ***10 cents each.***

Full descriptions and directions—as the number of yards of material required, the number and names of the different pieces in the pattern, how to cut and fit and put the garment together—are sent with each pattern, *with a picture of the garment to go by.* These patterns are complete in every particular, there being a *separate* pattern for *every single piece* of the dress. All orders filled promptly.

For ladies, give BUST measure in inches. For SKIRT patterns, give WAIST measure in inches. For misses, boys, girls or children, give both BREAST measure in inches and age in years. Order patterns by their numbers.

Satisfaction guaranteed or money refunded.

To get BUST and BREAST measure, put the tape-measure ALL of the way around the body, over the dress, close under the arms.

Special price of each pattern 10 cents.

Postage one cent EXTRA on skirt, tea-gown and other heavy patterns.

FREE We will give any TWO of these patterns for sending ONE yearly subscription, new or renewal, to the Farm and Fireside at the clubbing price of 35 cents.

Or we will send the Farm and Fireside One Year, new or renewal, and any ONE pattern for . . . . . **35 Cents**

Address FARM AND FIRESIDE, Springfield, Ohio

No. 3913.—LADIES' FANCY BLOUSE. 10 cents. Sizes, 32, 34, 36, 38 and 40 inches bust.
No. 3881.—LADIES' FIVE-GORED SKIRT. 11 cents. Sizes, 22, 24, 26, 28, 30 and 32 inches waist.

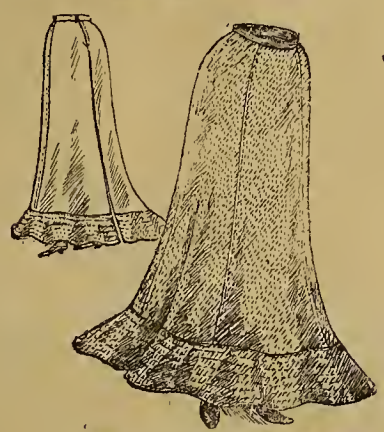
No. 4021.—LADIES' SHIRT-WAIST. 10 cents. Sizes, 32, 34, 36, 38, 40 and 42 inches bust.

No. 4060.—MISSES' SHIRT-WAIST. 10 cents. Sizes, 12, 14 and 16 years.

No. 4077.—LADIES' BLOUSE ETON. 10 cents. Sizes, 32, 34, 36, 38 and 40 inches bust.

No. 4053.—LADIES' FANCY WAIST. 10 cents. Sizes, 32, 34, 36, 38 and 40 inches bust.
No. 3982.—LADIES' THREE-PIECE SKIRT. 11 cents. Sizes, 22, 24, 26, 28 and 30 inches waist.

No. 4066.—MISSES' SHIRT-WAIST. 10 cents. Sizes, 12, 14 and 16 years.



No. 4062.—LADIES' FIVE-GORED WALKING-SKIRT. 11 cents. Sizes, 22, 24, 26, 28, 30, 32 and 34 inches waist.

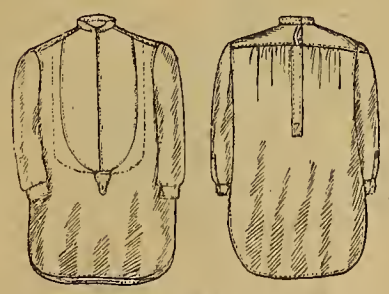
No. 4079.—MISSES' BLOUSE ETON. 10 cents. Sizes, 12, 14 and 16 years.

No. 4073.—LADIES' SHIRT WAIST. 10 cents. Sizes, 32, 34, 36, 38 and 40 inches bust.

No. 4071.—LADIES' ETON JACKET. 10 cents. Sizes, 32, 34, 36, 38, 40 and 42 inches bust.

No. 4048.—LADIES' FANCY BLOUSE. 10 cents. Sizes, 32, 34, 36, 38 and 40 inches bust.
No. 3841.—LADIES' FIVE-GORED SKIRT. 11 cents. Sizes, 22, 24, 26, 28, 30 and 32 inches waist.

No. 4069.—LADIES' SEVEN-GORED FLARE SKIRT. 11 cents. Sizes, 22, 24, 26, 28, 30, 32 and 34 inches waist.



No. 4072.—MEN'S BOSOM SHIRT. 10 cents. Sizes, 32, 34, 36, 38, 40, 42 and 44 inches breast.

No. 4083.—LADIES' CORSET-COVER. 10 cents. Sizes, 32, 34, 36, 38, 40 and 42 inches bust.

No. 4068.—GIRLS' DRESS. 10 cents. Sizes, 4, 6, 8 and 10 years.

No. 4082.—CHILD'S BISHOP DRESS. 10 cents. Sizes, 1, 2, 4 and 6 years.

No. 4078.—LADIES' HOUSE-GOWN. 11 cents. Sizes, 32, 34, 36, 38 and 40 inches bust.

Fine Silver-Plated Tableware

GIVEN FOR YEARLY SUBSCRIPTIONS

For years we have offered this same quality of high-grade ware to our subscribers, and it is now being used in thousands of homes with the greatest satisfaction. Having had a special set of new dies made for our exclusive use we are this year able to offer the same first-class quality of ware as before, with the additional attraction that it is an exact reproduction of a most popular SOLID SILVER PATTERN. It is impossible to describe the beauty of this new pattern, and the illustrations fall far short of conveying a full idea of its attractiveness. In finish it is perfect and will render complete satisfaction.

FIRST GRADE—OUR OWN PATTERN

Nickel-Silver Base The base of this ware is solid nickel-silver, which is white all the way through, positively will not change color or rust, and will wear for a lifetime. It is the highest grade known, being full twenty-five per cent nickel.

Coin-Silver Plate On top of this nickel-silver base is plated the full STANDARD amount of pure coin-silver. This combination makes a ware which we guarantee to give satisfaction. Test it, and if not found exactly as described return it to us and we will refund the money.

Full Size The ware is all full size, the illustrations on this page being just two thirds actual size.

Knives The base of the table-knives is fine steel highly polished. This is first plated with nickel-silver and then with twelve pennyweights of pure coin-silver. Ask your dealer what twelve-pennyweight knives are worth.

Initial Letter Each piece of this ware (except the knives) engraved free of charge with an initial letter in Old English. Only one letter on a piece.

Guarantee We absolutely guarantee every piece of this ware to be exactly as it is described and to give full and entire satisfaction or your money cheerfully and promptly refunded.

NOTE.—Postage or expressage on this ware is fully prepaid by us. Order by numbers as shown in connection with the cuts. Carefully indicate what initial letter is wanted.

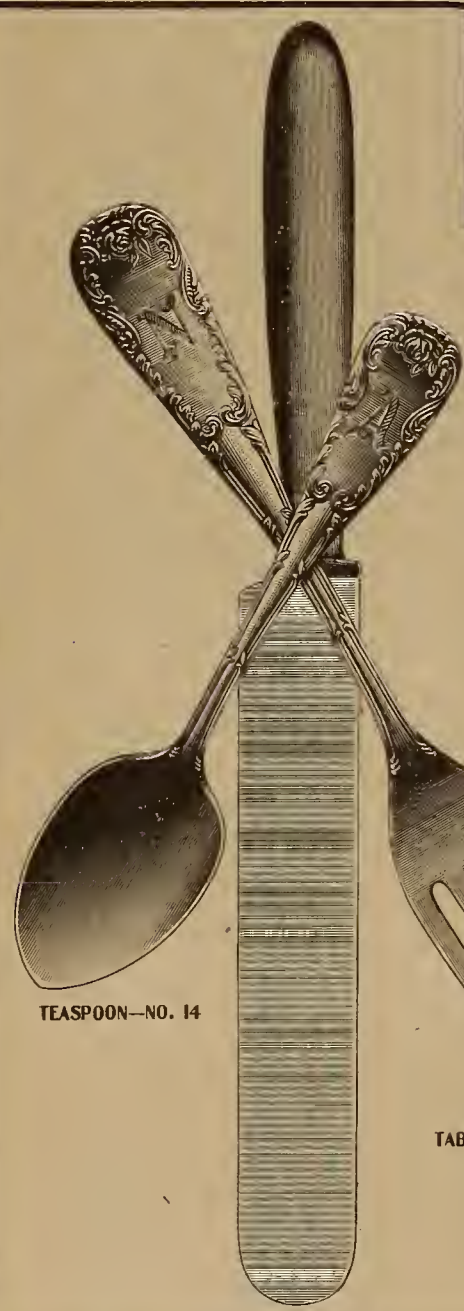
DESSERT-SPOON—NO. 31

COLD-MEAT FORK—NO. 59

TABLESPOON—NO. 16

Wear Tells the Quality The fact that we have sent out about two hundred thousand pieces of this quality of ware in a single year, all under our iron-clad guarantee, as stated above, and that complaints of any sort concerning it are practically unknown, is the best proof of its quality.

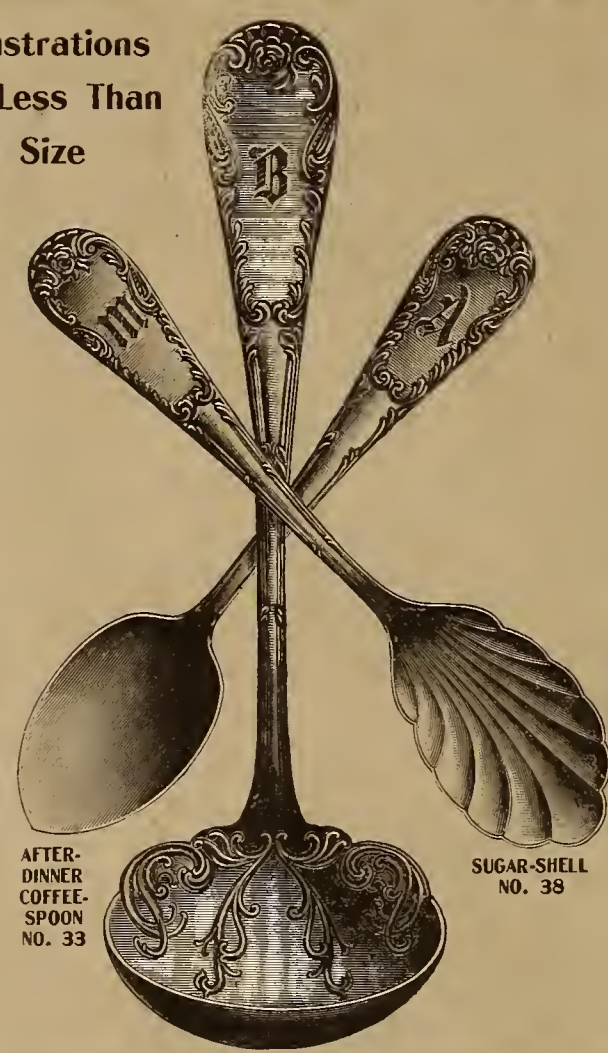
These Illustrations are Much Less Than Actual Size



TEASPOON—NO. 14

TABLE-FORK—NO. 25

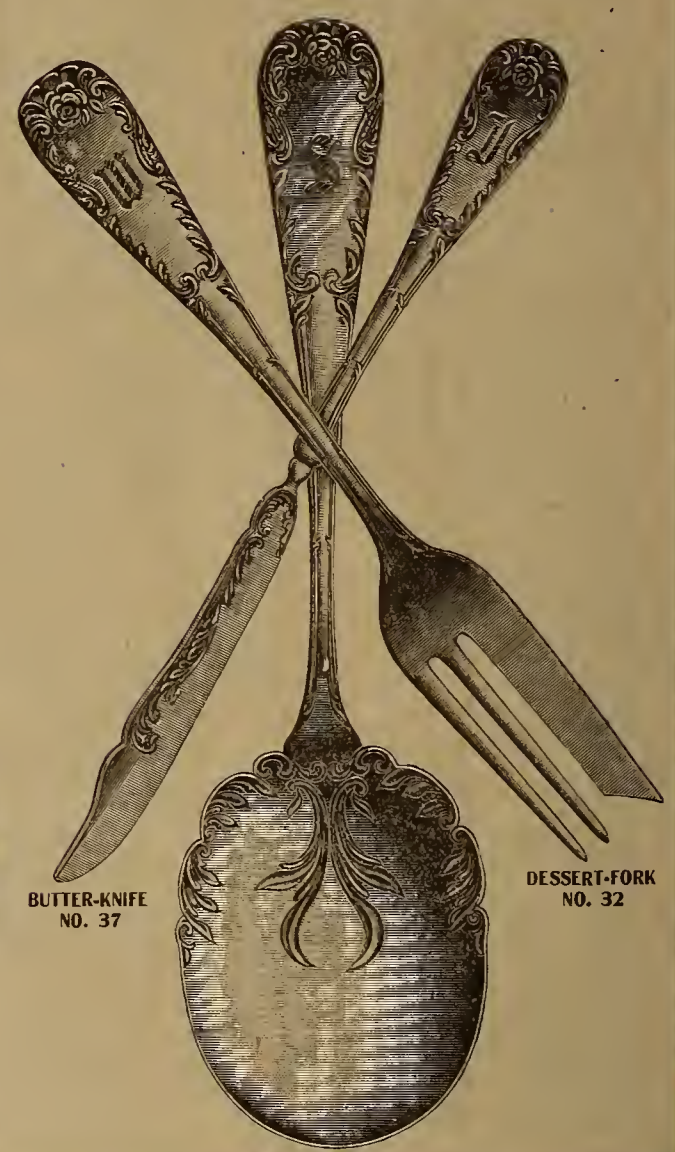
TABLE-KNIFE—NO. 29



AFTER-DINNER COFFEE-SPOON NO. 33

SUGAR-SHELL NO. 38

GRAVY-LADLE—NO. 58



BUTTER-KNIFE NO. 37

DESSERT-FORK NO. 32

BERRY-SPOON—NO. 39

SILVERWARE GIVEN FOR SECURING YEARLY SUBSCRIPTIONS TO THE FARM AND FIRESIDE

Set of 6 Teaspoons given for three yearly subscriptions
Set of 6 Forks given for six yearly subscriptions
Set of 6 Tablespoons given for six yearly subscriptions
Set of 6 Knives given for twelve yearly subscriptions
Set of 6 After-Dinner Coffee-Spoons given for three yearly subscriptions
Set of 6 Dessert-Spoons given for six yearly subscriptions
Set of 6 Dessert-Forks given for six yearly subscriptions
One Cold-Meat Fork given for three yearly subscriptions
One Berry-Spoon given for three yearly subscriptions
One Dessert-Fork given for three yearly subscriptions
One Gravy-Ladle given for three yearly subscriptions
One Child's Set (Knife, Fork and Spoon) given for three yearly subscriptions
Sugar-Shell and Butter-Knife (both) given for three yearly subscriptions

(All silverware is sent charges prepaid by us)

WE WILL SEND THE FARM AND FIRESIDE ONE YEAR AND THE SILVERWARE AT THESE PRICES

The Farm and Fireside 1 Year and a Set of 6 Teaspoons for	$ .75
The Farm and Fireside 1 Year and a Set of 6 Forks for	1.25
The Farm and Fireside 1 Year and a Set of 6 Tablespoons for	1.25
The Farm and Fireside 1 Year and a Set of 6 Knives for	1.75
The Farm and Fireside 1 Year and a Set of 6 Coffee-Spoons for	.75
The Farm and Fireside 1 Year and a Set of 6 Dessert-Spoons for	1.00
The Farm and Fireside 1 Year and a Set of 6 Dessert-Forks for	1.00
The Farm and Fireside 1 Year and a Cold-Meat Fork for	.75
The Farm and Fireside 1 Year and Berry-Spoon for	.75
The Farm and Fireside 1 Year and Dessert-Fork for	.75
The Farm and Fireside 1 Year and Gravy-Ladle for	.75
The Farm and Fireside 1 Year and Child's Set (Knife, Fork and Spoon)	.75
The Farm and Fireside 1 Year and Butter-Knife and Sugar-Shell (both)	.60

(To Club-Raisers:—When the subscriber pays you this special price you are entitled either to the regular cash commission or to count the name in a club)

ADDRESS FARM AND FIRESIDE, SPRINGFIELD, OHIO

Farm and Fireside Prize Crop-Growing Contests

$1,000.00 IN PRIZES

315 PRIZES—WHY NOT MAKE $300.00?

For the exclusive benefit of Farm and Fireside people we are going to award three sets of prizes, 315 prizes in all, as given below. FIRST SET OF PRIZES is for raising greatest weight of seed-corn, second greatest, third greatest, etc., from one pound of Finest Thoroughbred Seed-Corn furnished by us. SECOND SET OF PRIZES for raising the greatest number of pods, second greatest, third greatest, etc., from one half pound of a new variety Matchless Stringless Beans furnished by us. THIRD SET OF PRIZES for growing the greatest number of roses, second greatest, third greatest, etc., on Three Fine Rose-Bushes furnished by us. You may enter one, two or all three contests. You keep all you raise, and sell it, or plant it next season, as you please. Read "HOW TO ORDER" and "HOW TO ENTER FOR MORE THAN ONE PRIZE" at bottom of page.

Corn-Raising Contest

$100.00 Cash and 104 Other Prizes

GOLDEN HARVEST YELLOW DENT CORN

Pronounced the best dent corn in the world. Our supply is obtained by special arrangement with the originator. Ears large and handsome, with good, deep grain of deep orange-color, and small red cob. Stalk medium size (not large), few suckers, slender and leafy. Makes the best of fodder. Two good ears to each stalk. Husks and shells easily. Ripens in 90 to 100 days, and makes a crop even in dry seasons, because so early maturing and strong in growth. Has yielded **one hundred and thirty-six bushels of shelled corn to the acre.** Suits greater variety of soils than any other corn we know of. A big yielder naturally, this corn has been so improved by seventeen years' careful hybridization and perfecting that it is now simply unequaled, and will weigh out more shelled corn to the bushel than any other variety on the face of the globe.

The yield from the seed we send you will plant a field next year. Or you can sell at big price for seed-corn. *A money-maker,* and you will miss a splendid opportunity if you fail to get a pound, aside from the $100 and other prizes.

LIST OF PRIZES

We will give the following prizes for raising the greatest weight of corn, second greatest, third greatest, etc., from one pound of Golden Harvest Yellow Dent Corn described above:

1st Prize—$100.00 Cash.
2d Prize—Fine Piano-Box Buggy; value $60.00.
3d Prize—Latest Improved Spring-Tooth Harrow; value $20.00.
4th Prize—Set Solid Leather Buggy-Harness; value $15.00.
5th Prize—Latest-Make Breaking-Plow; value $10.00.
50 Prizes—Handsome Engraved Watch to each; value $2.00.
50 Prizes—Solid Steel Wagon-Jack to each; value $1.25.

HOW TO ORDER

SEND US 50 CENTS (part of this is for the Farm and Fireside, and the remainder for sending seed). We will then enter your name for one year's subscription to the Farm and Fireside, either new or renewal subscription, and will immediately send you, **securely packed, fully prepaid and free of all charges,**

ONE POUND GOLDEN HARVEST YELLOW DENT CORN

We will also enter your name for the Corn Prize Contest. Rules for weighing yield, making report, etc., sent with seed. Be sure to state which contest you wish to enter.

Bean-Raising Contest

$100.00 Cash and 104 Other Prizes

NEW PERFECTION STRINGLESS BEAN

This new bean is a cross between a strain of Extra Early Round Pod and an absolutely stringless wax variety, giving much larger and handsomer pod and without any string. It is also more prolific and ready for market a week earlier. Compared with other beans the pods are one third larger, averaging five to six inches long, and absolutely stringless. Bean unusually crisp, round, full and fleshy. Being extremely productive and easily grown. A very small patch will keep a family supplied the whole season. Grows without stakes or poles, being a true bush-bean. Seed is warranted pure, coming direct from the originator, who is one of the leading vegetable-growers in America. It is the perfection of stringless green-pod beans.

LIST OF PRIZES

We will give the following prizes for raising the greatest number of pods, second greatest, third greatest, etc., from one half pound of New Perfection Stringless Bean described above:

1st Prize—$100.00 Cash.
2d Prize—Set Elegant Parlor Furniture; value $50.00.
3d Prize—Latest-Make Double Cultivator; value $20.00.
4th Prize—Library of 50 Cloth-Bound Books; value $20.00.
5th Prize—Library of 25 Cloth-Bound Books; value $10.00.
50 Prizes—Handsome Dial-Scale to each; value $1.25.
50 Prizes—Set of Six Finest Silver-Plated Teaspoons, Engraved Initials, to each; value $1.00 each set.

HOW TO ORDER

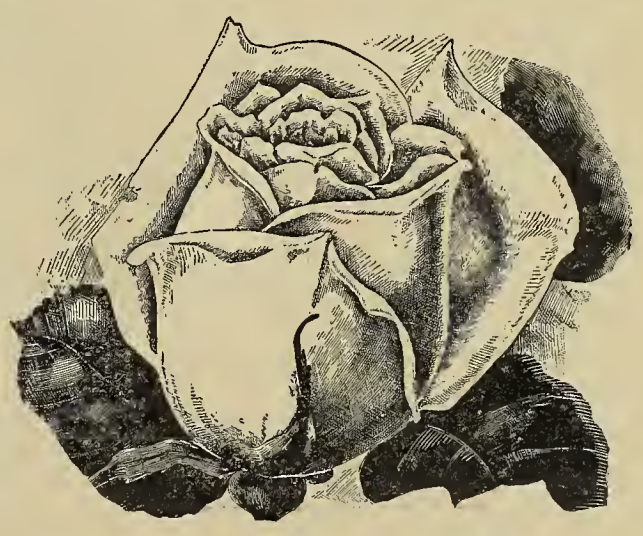
SEND US 50 CENTS (part of this is for the Farm and Fireside, and the remainder for sending seed). We will then enter your name for one year's subscription to the Farm and Fireside, either new or renewal subscription, and will immediately send you, **securely packed, fully prepaid and free of all charges,**

ONE HALF POUND NEW PERFECTION STRINGLESS BEAN

We will also enter your name for the Bean Prize Contest. Rules for counting the yield, making report, etc., sent with seed. Be sure to state which contest you wish to enter.

Rose-Growing Contest

$100.00 Cash and 104 Other Prizes



Three Prolific Queenly New Roses

Competitors in our rose-growing contest will be furnished three of the most beautiful and ready-growing roses in the world. The plants are extra large and uniform in size, and every one is now soon to bloom. Following is description of each variety:

WHITE MAMAM COCHET

A new, magnificent, ever-blooming rose. Flowers large and very double, with petals of unusually heavy texture, making it extra valuable in open ground. Has the vigor of an oak, with large, heavy foliage. Hardy and of extraordinary merit.

MLLE. FRANCESKA KRUGER

In its shading of deep, coppery yellow unique and strikingly beautiful. Flower of good size and very symmetrical. One of the finest roses known for full and continuous blooming.

CLOTILDE SOUPERT

A strong, vigorous grower. Large, beautiful, double flowers borne in sprays, blending in color from a soft shell-pink to a pure satiny white. An extremely profuse bloomer.

LIST OF PRIZES

We will give the following prizes for growing the greatest number of roses, second greatest, third greatest, etc., on three rose-bushes, the kinds described above:

1st Prize—$100.00 Cash.
2d Prize—Set Handsome Dining-Room Furniture; value $50.00.
3d Prize—Ball-Bearing Sewing-Machine; value $30.00.
4th Prize—Complete Decorated China Dinner-Set; value $12.00.
5th Prize—Splendid Kitchen-Cabinet; value $7.50.
50 Prizes—Beautiful Cut-Glass, Sterling-Silver Top Salt and Pepper Set to each one; value $1.25 the set.
50 Prizes—Silver-Plated Butter-Knife and Silver-Plated Sugar-Shell, the set of two to each; value $1.00 the set.

HOW TO ORDER

SEND US 50 CENTS (part of this is for the Farm and Fireside, and the remainder for sending roses). We will then enter your name for one year's subscription to the Farm and Fireside, either new or renewal subscription, and will immediately send you, **securely packed, fully prepaid and free of all charges,**

THE THREE EXTRA-LARGE ROSE-BUSHES

We will also enter your name for Rose-Growing Prize Contest. Rules for counting roses, reporting, etc., sent with rose-bushes. Be sure to state which contest you wish to enter.

HOW TO ENTER FOR MORE THAN ONE PRIZE

To enter any of the above contests the seeds or rose-bushes must be procured as above. No other kinds of corn, beans or roses can compete. You can enter one, two or all three of the contests. **FOR $1.00** (two contests) we will send you both corn and beans, or corn and rose-bushes, or beans and rose-bushes; we will also enter your name for TWO years' subscription to the Farm and Fireside, or send the paper to you one year and to any one else one year. **FOR $1.50** (three contests) we will send you the corn and the beans and the rose-bushes, and THREE yearly subscriptions to the Farm and Fireside for yourself or for your friends. Contests close at the end of the harvest season of this year. Arrangements made insure correctness, so that all prizes will go to those entitled to them.

ORDER NOW SEEDS OR PLANTS SENT AS SOON AS YOUR ORDER COMES **NO DELAY**

Address Prize Contest, FARM AND FIRESIDE, SPRINGFIELD, OHIO

FARM SELECTIONS

About Weeders

A correspondent asks, "I wish your advice about getting a weeder for corn. Will it produce more corn to the acre on a well-cultivated field than the corn-plow? How long can I use the weeder without injuring the corn? Can I use it just as the corn is coming through the ground?"

As we have often stated before, we now state again, that the weeder is a first-class tool for a first-class farmer, and not a good tool at all for a poor farmer. We do not mean a farmer poor in purse, but a farmer who farms poorly. In order to have success with the weeder you must have a seed-bed well prepared. It can be used before the corn is up, and should be used as a rule. There is a time when the corn is just coming through the ground when the weeder will pull out some corn, and some other tool should be used just then. When the corn gets rooted, and especially if not cultivated too early in the morning, the weeder should be kept going. It would not hurt to go over a sixty-acre field every other day with a three-row weeder.

Last year it was used on a part of our corn until the corn was laid by, and laid by with the weeder. That corn stood the dry weather better than that laid by with the plow. Last year, however, the weather was very dry and hot. If the ground was full of moisture, and the corn rank and tender, it may be that it could not be done.

If you are a good farmer, get a weeder, and then find out just when and how to use it. It is no difficult matter to the man with eyes in the front of his head. There are times when it is not possible to use a weeder; namely, when there is a rain every day and the ground is mucky. The use of the weeder is primarily to form the dust mulch. Incidentally, if it is used often enough, it kills the weeds just when they are a-bornin', and that is the time to kill weeds. What sense is there in allowing weeds to get three or four inches high, and then be required to take a plow to get them out of root? Kill the weeds just as they come through the ground. A weeder will kill more weeds in that condition in one day than a farmer can kill of the larger weeds in three days, and do a better job and form a dust mulch while doing it.—Wallaces' Farmer.

Root-grafting the Peach

A friend of mine says that he recently visited a well-known orchardist and nurseryman in Maryland, and that he was making a success of root-grafting the peach, and says he does not lose over three per cent. He uses whole roots, and grafts at the crown, and cuts off roots to a length of about eight inches. He uses a cleft-graft, and waxes with warm wax. He stores his scions and roots under a pile of sawdust in an open shed, and after working stores his grafts in the same way.

RECENT PUBLICATIONS

BOOKS NOTICED

Canary-breeding. By Chas. N. Page. Cloth, 75 cents; paper, 25 cents. Chas. N. Page, Des Moines, Iowa.

The Sandals—A Tale of Palestine. By Z. Grenell. Cloth. Price 45 cents. Funk & Wagnalls Company, New York.

The Courtship of Sweet Anne Page. By Ellen V. Talbot. Cloth. Price 45 cents. Funk & Wagnalls Company, New York.

Captain Jenks, Hero. By Ernest Crosby. Illustrated by Dan Beard. Cloth. Price $1.50. Funk & Wagnalls Company, New York.

CATALOGUES RECEIVED

G. Camerer, Madison, Ind. Catalogue of vineless sweet-potato plants.

Chas. B. Horner & Son, Mt. Holly, N. J. Catalogue of shade and ornamental nursery stock.

Arthur J. Collins, Moorestown, N. J. Illustrated nursery catalogue. Nut-trees a specialty.

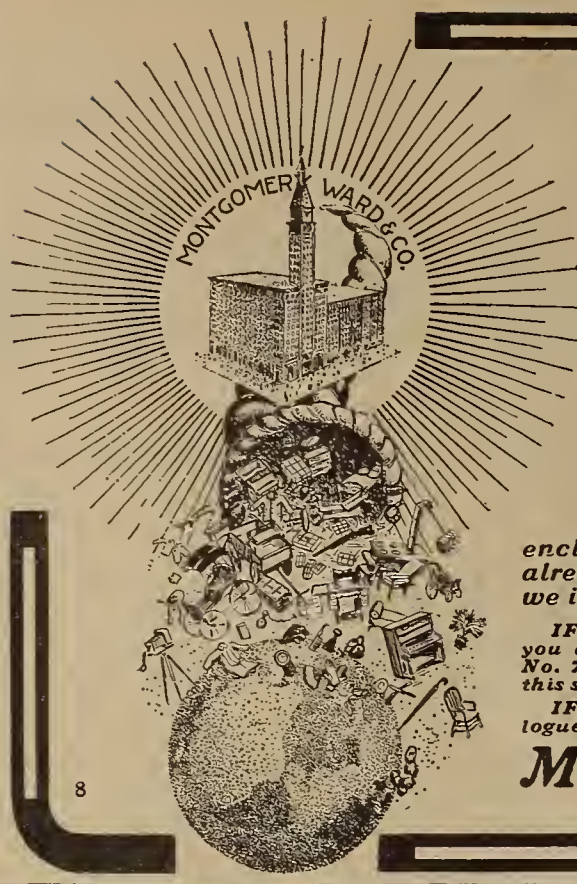
The Hussey Mower & Implement Co., Dublin, Ind. Descriptive circular of the Hussey "No-Pitman" mower.

James J. H Gregory & Son, Marblehead, Mass. Illustrated catalogue of choice, tested vegetable and flower seed.

Phoenix Nursery Co., Bloomington, Ill. Illustrated catalogue of trees, shrubs, roses, bulbs, greenhouse and bedding plants, etc.

Buffalo Pitts Company, Buffalo, N. Y. Illustrated catalogue of disk, spring-tooth and spike-tooth harrows, cultivators, hay-rakes and land-rollers.

Thomas Meehan & Sons, Germantown, Philadelphia, Pa. Handsome illustrated catalogue of ornamental trees, shrubs, vines, evergreens, hardy perennials and fruits.



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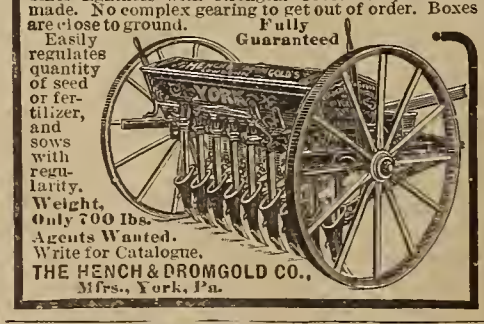

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FARM AND FIRESIDE.

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How a Japanese Farmer Became a Baron

BY JESSIE ACKERMANN

During the feudal days just before the Restoration in Japan political clouds hung dark and heavy over the empire, and storms, fierce and wild, burst forth from every direction. For two hundred and fifty years Japan had been closed to all commerce and outside intercourse. The governing power, though not the throne itself, had been seized by the mighty shogun, and the Emperor was reduced to a mere puppet, squatting upon mats behind screens, forced into doing the bidding of those who really held the reins of government.

The feudal system was well established, and the entire country was divided into clans, ruled over by lords, who gained possession of as much land as each could take from the other by force of arms. For centuries there was never a time when the struggle for power and possession was not being waged in some part of the empire. The farmer was really the only class who kept out of the fight.

There was no standing army outside of the body known as the Imperial troops, who acted in defense of the Emperor and the royal family. The strength of each lord depended upon the number of soldiers he was able to support. These men were called retainers, and received nothing for their services but their rations and clothes. The lord always dwelt in a stately, fortified castle defended by the well-armed, well-trained retainers, whose ancestors had been skilled in warfare for many generations.

This system created a class known as the "Samarai," and the fondest hopes of every mother and father for their boy was that he might enter the ranks of this class, composed of the real gentry. The spirit of patriotism so wide-spread in Japan to-day is largely due to the training of that time. Each retainer wore two swords—one long one, with which to do battle and defend his lord, and a short one, never to be used except in case of personal disgrace. If a soldier failed in duty or in any way disgraced his calling his honor demanded that he take his own life in a prescribed manner. In the face of such misfortune his highest glory was to meet this established demand and commit suicide by disemboweling himself. For this purpose a small sword was worn, to be used only to vindicate his honor.

The loyalty of these men to their lords is without a parallel in history. No sacrifice was too great to make, and no hardship too heavy to endure, if through their own suffering the object of their devotion might be served.

About thirty-five years ago there arose a sentiment that the Emperor should be restored to power and become the true ruler of the land. This led to a fierce war, joined in by the lords who were inclined to take sides in the conflict, and every retainer stood ready to do the bidding of his master.

The mighty house of Tokugawa, long in power, reigned at the time of the outbreak, and so powerful was it supposed to be that few believed its overthrow possible. In the central north of the island was a long-established house, known as the Lord of Sendai, and in this struggle he joined forces against the government and became a rebel, leading his retainers in battle against the Imperial army. When defeat faced him, and the last hope of victory faded away in his captured soldiers, with his remaining force the lord surrendered to the Emperor. Having voluntarily stacked arms, he was pardoned by the Emperor, and three fourths of his possessions were confiscated as punishment. To secure the country against another uprising a detachment of the Imperial army was stationed at Sendai, and the castle became the barracks.

To any one unfamiliar with the customs of that time it is impossible to conceive what the overthrow of this system meant to the retainers. The lords were, of course, reduced in means, and the men were unfit for any occupation whatever. To fight and wear the sword was all they could do, and in all the country tens of thousands of men were thrust upon their own resources to face starvation. Many of the lords went down to the last grain of rice with their faithful defenders.

The defeated lord, Kunishigi Date by name, believed the best way to help men was to give them a chance to help themselves, and he set about to open such a channel of assistance by teaching the men that all that remained was to "beat their swords into plowshares and their spears into pruning-hooks." North of the main island is a large island which at that time was supposed to be a barren waste. The lord offered to exchange his remaining possessions at Sendai for a tract in the northland. To this proposition the government consented, and with a party of six of his trusted men the undaunted reformer set sail in a fishing-junk, and after such experiences as Paul relates in his "oft journeyings" the little party landed upon a distant shore of the Island of Yezo.

As might have been expected, it was not

[CONCLUDED ON PAGE 5]

A JAPANESE TEA-GARDEN—WOMEN PICKING TEA

FARM AND FIRESIDE

PUBLISHED BY

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We believe that all the advertisements in this paper are from reliable firms or business men, and do not intentionally or knowingly insert advertisements from any but reliable parties; if subscribers find any of them to be otherwise we will be glad if made known to us. Always mention this paper when answering advertisements, as advertisers often have different things advertised in several papers.

WITH THE VANGUARD

Announcement to the Readers

The May 1st issue of FARM AND FIRESIDE will come to you with a new "make-up." The publishers have planned to present to you better reading matter in a more attractive form. It is their declared policy to make the paper better than it ever has been —in fact, to make it so good that not one of you can ever afford to be without it. To that end new departments have been added and improvements made in the old ones. It is their aim to furnish you with a farm and home paper that will interest every member of the family. With this brief foreword we will let you await the coming of the next issue to speak for itself, and show itself to be "ahead of the brag."

"FARMING IN THE CITY" is the title of the fifth annual report of the Philadelphia Vacant Lots Cultivation Association. This association was organized early in 1897 just when the country was beginning to recover from the great industrial depression. That year it successfully tested the Pingree "potato-patch" plan of relief for the unemployed in one hundred gardens on detached lots, aggregating twenty-seven acres, which yielded a total product of six thousand dollars. Year by year the work expanded. In 1901 six hundred and thirty-two gardens, aggregating one hundred and fifty-eight acres, yielded a total product of thirty thousand dollars.

In regard to making the plan of relief a permanent one the report says, "As industry revived and the able-bodied workers found regular employment many persons felt that the necessity for our work had passed, but as we went on we found that the demand for gardens increased rather than diminished. The old and the partially disabled men and women who could find no place in the strenuous industrial system even at the height of its activity still needed assistance to eke out a living, and our plan offered aid with no taint of almsgiving. Other cities which had adopted the vacant-lot-cultivation plan under stress of general lack of employment have indeed abandoned it as industry has revived, but we have broadened the basis of our system of relief through work, and have conclusively proved that even in the most prosperous times there are many families who sadly need, and gladly accept, the aid it offers. Philadelphia was not the first to adopt this excellent system, but the Philadelphia Association has developed the plan more fully and has put its relief work upon a broader and more permanent basis than any other organization in the country."

As an important and apparent fact of the five year's work the report notes, "The immensely greater benefits obtained by opening opportunities to the unemployed rather than by attempting to take care of them as mendicants. The contributors have furnished during the five years less than fifteen thousand dollars, and the gardeners have had direct benefits to the amount of eighty-four thousand eight hundred and ten dollars, and indirect benefits of immense value both to them and the community that cannot be estimated in dollars and cents. The indirect benefits are improved health, decreased drunkenness and crime, increased comforts for wives and children, and increased happiness for all.

"The most essential feature of any helpful work is to render aid in such a manner as not to pauperize, but to uplift the beneficiaries. Any method of almsgiving to those able to earn their own living inevitably pauperizes. But a work of this character, which gives to the beneficiaries nothing except an opportunity to work, and takes from them nothing that they have earned, is in the very nature of things the truest charity."

THE Senate Committee on Manufactures reported favorably the Hansbrough Pure Food Bill for preventing the adulteration and imitation of foods, beverages, drugs and condiments in the District of Columbia and the territories, and for the regulation of interstate commerce in them.

If the bill becomes a law, as it ought to, it will supplement the pure food laws already enacted by three fourths of the states of the Union.

It is hardly necessary at this late day to explain the need of both state and federal legislation against the sale of adulterated and deleterious foods and drugs. The facts that frauds in foods and drugs have grown to enormous proportions, and that many adulterators are absolutely regardless of the health or even the life of consumers, are very generally known.

BEEF-EATERS are alarmed over the advances in prices, but the farmers who have cattle to sell are enjoying the situation. Not for many years have fat cattle brought such prices as the market now gives. The outlook is that high prices for live stock will prevail for months to come.

Comparing prices in the Chicago market the "Record-Herald" says:

"Beef cattle on the hoof are higher now than at any time since 1882, and the average weight is about the lightest on record for this season of the year. Comparing the average prices ruling at the yards March 28th with the average of the last twenty-five years, it will be seen that live-stock values are fully as unusual as are those of meats. The comparisons are as follows:

	AV. PRICE FOR 25 YEARS.	AV. PRICE MARCH 28.
Native beef cattle.	$4.75	$6.40
Heavy hogs	4.85	6.73
Native sheep	4.10	5.25
Lambs	4.75	6.25

Explaining the advance in prices Secretary Wilson says, "To me the rise in the price of beef is very easily explained. It is due almost wholly to a short corn crop last year, and to a great demand for beef caused by the prosperity of the people of the United States. The high price of corn has made it necessary for Western cattle-feeders to send to the South for cotton-seed meal to feed their stock with. The price of fat cattle on the hoof at the Chicago stock-yards has advanced from four or five cents a pound to seven cents. Men who have fine beef cattle to sell can almost get their own prices.

"There is a great demand for cattle, and that means a great demand for beef. The people of the United States are eating more beef now than they ever did before in their history. This is because they are making money and spending it. There are not many families in this country that do not have their steaks and roasts and boiling-pieces. The American people are by long odds the best-fed people in the world.

"Under such circumstances it is only natural that the price of beef should advance. Cattle and meat, like all other commodities, have to follow the laws of supply and demand. The men who have cattle to sell naturally want the highest prices they can get. It is the same with the packers and retailers."

DURING the Senate debate on the Oleomargarin Bill Senator Dolliver gave an interesting object-lesson on fraud food methods. Declaring that oleo makers and dealers were evading the law of 1886, which required every package of oleomargarin to be stamped plainly on the wrapper, he handed a package to Senator Tillman and challenged him to find the mark which was on it. On examination Senator Tillman failed to find it. Then Senator Dolliver pointed out the fine print on a corner of the wrapper.

POULTRY-RAISERS are finding a good demand for their products, which will likely continue so long as there is a scarcity of beef and the prices of other meats are high. At present prices eggs are comparatively cheap, but consumers are figuring on good substitutes for high-priced meats, and there will be an enormous demand for all poultry products.

ON APRIL 3d the Senate passed the Oleomargarin Bill by a vote thirty-nine to thirty-one. As the measure differs somewhat from the bill passed by the House it will go back to the House, but there is no longer any doubt about it becoming a law substantially in the form desired by its advocates.

Senate amendments provide for a tax of ten cents a pound on adulterated butter, a tax of one fourth of a cent a pound on process or renovated butter, and for an annual tax of six hundred dollars on manufacturers, four hundred and eighty dollars on dealers and forty-eight dollars on retailers of process butter. These amendments are aimed at frauds just as detectable as those practised by oleo makers and dealers.

BUFFALO steak and pemmican were once staple foods of the West, but it is not recorded that Indians or pioneers ever made any buffalo butter. "Harper's Weekly," however, tells of a recent experiment on that line by a man in Nebraska as follows:

"It appears that near Silver Bow lived a farmer named Hunt. In his barn was a young buffalo cow which he was keeping a few days before she was shipped to an Eastern zoological park. One afternoon a man came along and applied for work. He was engaged, and as evening approached a tin pail was given to him and he was sent to the barn to do the milking. Unfortunately the farmer forgot to say anything about the buffalo cow. Subsequently seismic disturbances were heard in that direction. Shortly after the new man came down. He hobbled to the house, where he met his employer. 'Boss,' he remarked, pointing backward with an uncertain thumb, 'boss, if it's all the same to you I'll quit. I'm sure I can't never get along with that high-shouldered heifer out there.'"

ALFALFA has been a standard crop of the greatest usefulness in some Western states for years past. Experiments have been made with it in many states east of the Mississippi. There have been failures, of course, but these experiments have demonstrated that it can be successfully and profitably grown in the Middle and Eastern states under the right conditions of soil and culture. Therefore it is recommended as a trial crop to progressive farmers who will study the needs of the plant in the way of soils and management. Start with an acre or two, and don't give it up if the first and second attempts are failures. Experience only can give the skill required for a fair trial.

HIGH prices of feeds for milk and meat have forced the feeders to feed with the pencil. It is a good habit to cultivate, for only those who can "figure on feeds" accurately are sure of coming out even.

Agricultural News-Notes

Professor Thomas Shaw has left the University of Minnesota to take editorial charge of "The Farmer." By good work in agricultural science, particularly in animal husbandry, he has won distinction, and deserves a full measure of success in his new field of labor.

The annual production of oleomargarin is now five times as great as in 1887. In 1900 Germany led in the annual production, with two hundred and twenty million pounds; the Netherlands made one hundred and twenty-three million pounds, and the United States made one hundred and seven million forty-five thousand and twenty-eight pounds.

Neglected minor crops are now beginning to be grown more generally as substitutes for the grain crops. In Illinois, mainly in the southern portion, during the past two years fifteen hundred and sixty-five acres of beans were grown. The average yield to an acre was twelve bushels. The price a bushel in 1901 was two dollars and thirty cents, making the total value of the crop forty-five thousand two hundred and six dollars.

The tendency of farmers, truckers, fruit-growers and dairymen to sell their products by co-operating together is increasing. A tobacco-growers' association is now being formed in Kentucky for a similar purpose. Each grower is required to give a bond that he will deliver his crop to the association managers or else pay to the same two dollars a hundredweight if sales are made to outside parties. The growers in eleven counties have united in this movement to obtain better prices.

An American inventor has now come to the front claiming that he has invented a leather-splitter that enables the tanner to make the finest of "imported" kid-glove stock with this machine. With it the hide of a hog can be split into so many and extremely thin strong skins as to astonish those who have never had an opportunity of seeing it. "The National Provisioner" thinks it quite probable that before long the skin of the hog will be too valuable to warrant its sale as a meat product.

Reporting on a series of experiments conducted to ascertain the comparative frost-resisting properties of different varieties of strawberries the Montana Experiment Station says:

"In the varieties which were most damaged by frost the seeds were most exposed to the surface; in the varieties that suffered least the seeds were least exposed, and the gradations of seed exposure and consequent injury were plainly marked. Nine varieties of strawberries experimented with—the Bissel, Crescent, General Putnam, Princeton Chief, Parker Earle, Robinson, Stevens, Shuster Gem and Warfield—all of which have the seeds deeply embedded in the pulp, escaped injury altogether. Varieties with short fruit-stalks and long leaf-stalks, it is also noted incidentally, are less liable to injury from late spring frosts, from the fact that their flowers are to some extent protected by the foliage."

The official reports on shade-grown tobacco are conservative, and say that the experiments indicate it is not likely that the growing of Sumatra type of leaf in Connecticut can be made a complete success without some years of experience and intelligent experiment. The new industry is so promising, however, that some Connecticut growers are going to undertake it on a commercial scale.

The "New England Tobacco Grower" says, "W. S. Pinney is in active preparation for the raising of forty or fifty acres of shade-grown tobacco the coming season by the Olds, Whipple and Pinney syndicate. Mr. Pinney has received a car-load of nails, and expects two more. He has also received his first instalment of more than one million yards of cloth to cover the framework that will be used in the growing of the crop, and says he will use from twenty to thirty car-loads of lumber, besides untold quantities of other material, for his summer's crop. A number of other growers here will this season make the experiment, but none of them on so extensive a scale."

RURAL AFFAIRS

Savings and Loan Associations For a long time I have been wanting to say something, as a warning to my friends, about the various mutual "savings, loan and building associations" which have sprung up and gone down, and are still springing up like mushrooms all over the land. They are right in principle, but I fear the majority of them are wrong in practice.

In New York (as probably in other states) the commonwealth exercises some control or supervision over such associations, but this does not seem to prevent a good many people from losing a good deal of hard-earned money in them. There are some local concerns, as for instance one in our adjoining city, which are run on correct lines by responsible local people, who do not charge extravagant salaries and expenses. With small expenses, care in placing loans, and businesslike management, the returns are moderate and safe.

They afford a desirable chance to the man of moderate means and income, to the man who works by the day, week, month, year or on a regular salary, to save up a little of his earnings, even if this be only five dollars a month, and invest this safely and profitably. Membership in such an association makes the effort to be saving and to lay up a little bit of one's earnings compulsory. The weekly and monthly payments have to be made regularly and promptly. The knowledge that a reserve fund is accumulating slowly but surely serves as a further incentive to thrift and economy, and easily compensates for some little sacrifices that may have to be made in order to meet the payments. Many a happy home has been founded in this way. This is the bright side of the picture, and it is predominating in some of the purely local associations.

But in many other instances such institutions are born in selfishness. A few persons without much means, credit or particular respectability or responsibility may come together and organize a savings and loan association, and are thus enabled to induce hundreds to whom they are perfect strangers, and possibly people who are ordinarily cautious and perhaps suspicious, to invest their good money, often under the claim that the investment will bear a high rate of interest or that it will more than double in a few years' time. The organizers or promoters serve as president, secretary, etc., and allot to themselves quite large salaries and expenses, and the shareholders submit. The thing may apparently run all right for a few years, or so long as the loans are made with shrewdness and care, but there is no knowing how soon the whole structure will tumble into the dust.

I have belonged to a number of these associations, but am withdrawing now from the very last. All of them have had reverses and had to struggle along for a while, and most of them had to give up business, being unable to redeem their shares at par. The one on whom I have just served notice of withdrawal appears to me to be somewhat "shaky." In the course of over three years I have put nearly four hundred dollars into it, the withdrawal value of which is given me as a little over three hundred dollars. Thus by joining this concern I have lost interest on several hundred dollars for several years and about seventy-five dollars on the capital. My advice to all is this: Let all these associations severely alone unless you have reason to place full confidence in the people who manage them, and feel that you will stick to them until the maturity of the shares. The chances otherwise are all against you. As I have said, the principle is right, even enticing, but the practice is often very different.

Fish Composts A reader in Piedmont, W. Va., writes that she has two thousand pounds of salt fish which she desires to utilize as a fertilizer on her farm. The question is how to prepare this material so as to get the best results from it. In a general way I have to say that great quantities of rich fertilizing materials—such as waste fish and fish-waste, carcasses of dead animals, bones, entrails and butchers' offal—are allowed to go to waste, and often to become a nuisance and offense to the eyes and nostrils of people everywhere. As a rule we are not as careful in saving or putting to profitable use such matters as we should. We would find it to our advantage to do so.

On every farm there should be a well-arranged compost-pile, in which all wastes of this kind are made available for ready application as plant-food. The foundation of such a compost-pile may be made of horse-manure, or possibly of muck, more or less dry, and placed in any well-drained spot, preferably on a rather solid surface or floor, but not necessarily under cover. It will be an advantage rather than a detriment if the pile is exposed to occasional rains, for it must be kept rather damp. If under cover, or in the absence of rain, water may have to be applied artificially to guard against drying out and fire-fang. Make the first layer of muck or manure a foot or so in depth. Upon this spread a thin layer of whatever waste you may have, such as fish, offal, dead animals (if large, cut into pieces of reasonable size), feathers, wool, bones and similar materials. Upon this put another foot layer of manure or muck, next another layer of the waste materials, and so on, finishing with the manure or muck, and making a pile four or five feet high.

Considerable heat will soon be developed by fermentation, and the process of decomposition will proceed at a rapid rate. Be sure to keep the pile damp enough to prevent deterioration by fire-fang. After a few weeks of fermentation the pile may be forked or, if muck, spaded over thoroughly, and this repeated a number of times at intervals of a week or two, until the whole has become one homogeneous mass, and is ready for application to the soil.

It will be found a most admirable manure not only for all ordinary farm crops, but especially for garden vegetables, strawberries, etc. For garden purposes it may still be improved in value and effectiveness by adding at the time of constructing the compost-pile, or at the first forking-over, a small quantity of kainite or muriate of potash, or even wood-ashes where the pile is kept well covered with muck. Fresh wood-ashes must be used in combination with stable-manure and animal-waste with some care—never in excess—in order to prevent the escape of ammonia set free by the chemical action of the caustic potash on the nitrogen-bearing substances.

In many places along the sea-shore fish and fish-wastes may be procured in almost unlimited quantities at little expense, and when composted according to directions here given the resulting manure will be very rich in just the elements that will produce thrifty growth in most garden vegetables. It is true that the smell even of fresh fish is not particularly pleasing to people's nostrils, and many may fear that the fish-compost has an odor too rank to allow the handling of such manure in any way convenient. The fact is that the process of composting if done properly, and especially with the free use of absorbent materials (muck, litter, etc.) in the compost-heap, and with thorough mixing, soon destroys all the offensive odors in any of these animal substances. The odor of many of our manurial substances cannot be likened to the perfume of roses or heliotrope, but we use them nevertheless.

And we should not pay good money (and a lot of it) for chemical plant-foods so long as we neglect to profit by good chances of picking up all these and other waste materials on the farm and in the neighborhood. On some farms I have found quantities of wood-ashes, both leached and unleached, accumulated for years and left in unsightly piles near the house. Even if the potash is to some extent, perhaps mostly, leached out and lost, the ashes have yet a considerable fertilizing value, and if put on the garden-plot would greatly aid in making the soil better in texture, richer in the elements of plant-food, and consequently far more productive of satisfactory results.

My annual "roast of rubbish" has also often aided in materially increasing my garden crops. The foundation for this roast is usually made of the rakings of the lawns and yards in early spring, consisting of dead leaves, grass, old corn-cobs, old straw and rubbish of all sorts, possibly oyster-shells, old shoes, sticks, bones and other things too numerous to mention. When all this stuff is raked up in piles I start a fire with brush and other rubbish or the trimmings of trees and vines, and then pile the rakings on, over and around the embers. Oyster-shells, if available, are piled over the top, and the whole mass is allowed to burn without much flame, and possibly kept smoldering whole days and nights, until all is reduced to ashes and charcoal. In this I have a most excellent material to put on my melon, cucumber and squash hills, having a tendency to repel beetles, bugs and borers. All these are little economies that help to save money, and to increase our profits and pleasures in soil work. T. GREINER.

SALIENT FARM NOTES

The Catalpa Speciosa It is a sure conclusion that no farmer can manage his farm to the best advantage without wood. He must have fences to subdivide his farm into small fields, to enable him to pasture the different portions and utilize the aftermath of the crops grown on the land—to convert into meat and fertility what would otherwise be wasted. This calls for fence-posts, even if he uses wire for the fence.

The Forests Disappearing He must have sheds to shelter his stock from the weather, and these call for posts and poles and siding. In fact, he has a thousand and one uses for wood aside from fuel, and many a farmer who is striving to manage his farm in the most profitable manner is beginning to think seriously about the rapidly diminishing supply and increasing cost. The groves and narrow belts of timber that grew along the smaller streams are gone, or are rapidly going; the grand old forests that extended for miles on either side of the larger rivers and surrounded our beautiful lakes are being cut away at a rate that means extinction in a few years more. When these are gone where are our supplies to come from?

Little or no Reforesting Being Done No efforts worth mentioning are being put forth to reforest the hills and valleys that have been denuded by the ax of the short-sighted woodsman, whose chief aim has been to destroy everything before him. Thousands on thousands of acres of land that was originally covered with forest was of little value for any other purpose, yet the men who bought it almost for a song could not rest until they had "cleared" it. Then the action of frost and storm soon stripped it of its little agricultural value, and in a few years it was abandoned. Perhaps the time will come when the government will make an effort to reforest the bare and gullied hillsides and other rough land, but the time when they will again be producing wood for the farmer's use is too far distant to be of benefit to us or the generation to come after us.

The Farmer Must Grow His Own Supplies To make sure of a supply of wood for farm use the farmer must plant it on his own land. Some have made an effort to do this, but owing to a lack of knowledge of the varieties best adapted to this purpose many of them have blundered sadly, and a man can make a blunder of this sort that will affect him only about once in his life. If instead of planting the groves of soft maple, that now dot the prairie country, farmers had planted Catalpa speciosa, white ash or even sugar-maple these groves would now have a value that would count for something. The reasons for planting soft maple instead of the better class of trees are well given by a farmer who settled on the open prairie thirty years ago. Said he, "The first winter I lived here we had five or six of the worst blizzards I ever saw, and I and my stock nearly froze to death. I made up my mind that I would plant a grove to the west of my home the following spring if I had to go to the timber seven miles away and dig the seedlings with a hoe. In talking about the matter with a friend, who was a nurseryman, he advised me to go to the woods in May and gather soft-maple seed and plant it in drills immediately. I did so, and grew about ten thousand seedlings. I planted eight acres of grove and gave the rest of the plants to my neighbors. Now look in any direction and you can see soft-maple groves. They cost nothing but the work of gathering the seed and planting. It is a clean, healthy tree, grows rapidly, and it made the windbreaks we needed, and for these reasons it has been planted by millions."

A Valuable Tree At the time these maple groves were planted Catalpa speciosa had not been heard of except in the localities where it is indigenous, along the lower Wabash River and some streams in Ohio, Missouri and Tennessee. If those who knew the value of this tree had carried the seed with them to the prairies and planted them probably half the groves now growing there would be catalpa instead of maple, for it begins to bear seed at an early age and the seedlings are as easily grown as maple. But at that time even horticulturists knew little about this valuable tree. Many actually did not believe such a variety of catalpa existed. It was thought that Speciosa were merely well-developed specimens of the common Bignonioides, a small and next to worthless variety common in all

[CONCLUDED ON PAGE 4]

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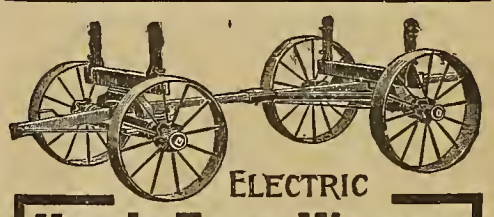

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The Need of Nitrogen.—Of the three elements carried to us in "complete" fertilizers we look upon nitrogen as the "wood-maker." It produces the rank growth of wood in the fruit-tree, the heavy growth of corn or wheat or grass. It is the leading element in well-kept stable manure, and we know how such manure promotes growth of stalk and leaf. It is abundant in new soils containing much humus, or decayed vegetation. It is found in sods of clover or peas. Many soils are deficient in this element (nitrogen), as is evident from the short growth of cultivated plants. The fertilizer containing lots of nitrogen for one thing would be the best fertilizer for much land if it were not for the fact that this element is too costly to buy in a large quantity for crops that do not bring in big incomes an acre. It is gotten most cheaply in home-made manures and the clovers, peas and vetches.

The Form of Nitrogen.—But when a soil is deficient in this wood and leaf making element, and there is no manure, and a clover or pea sod is out of the question, the "best fertilizer" contains some nitrogen, even if it is costly. Not only this, but plants that should make a rapid growth in early spring may demand nitrogen even when the soil is pretty well stored with it in organic form. Hot weather is needed to change it into the form necessary to plant-feeding, and some commercial nitrogen in the form of a nitrate may pay well and be "best" under the circumstances. True, bone made available by treatment with acid supplies some available nitrogen—that is, available very quickly after application has been made. But, generally speaking, this costly element should be secured largely in manures and the legumes, and where it has been done the "best fertilizer" for ordinary crops does not contain big quantities of this costly material.

Cheaper Nitrogen.—If we must buy a supply of this element of plant-food, and if the crop grows throughout the summer, giving time for chemical changes, it is practicable to supply nitrogen in carriers that are less costly than nitrate of soda, dried blood or acidulated animal bone. Tankage, bone-meal, fish-scrap, etc., usually bring us the material in cheaper form, and as they rot in the soil in hot weather it becomes ready for use by plants.

Is it not evident that no rule can be laid down for all soils about paying out money for this one element? We make a guess, taking into account the state of the soil as evidenced by growth of plants in previous years, and considering the period of growth of the particular crop and its usual profitableness, and finally we depend upon the results of our own experiments made on a small scale in previous years. This is the one way to assure the most profitable fertilization.

Phosphoric Acid.—We should feel at home with this element, for the reason that it is the leading one in nearly every fertilizer on the market. There are two reasons for this prominence of phosphoric acid. One is the fact that it appears to be more deficient in most soils than either of the other two materials, and the other reason is that it is the cheapest, and therefore naturally is drawn upon by the manufacturer. We do know that the probabilities always favor the use of phosphoric acid. Experiment usually proves that it affects growth, and being cheap its use is most apt to pay the farmer. Indeed, the results are so marked that many jump at the conclusion that neither of the other two elements are needed, and it is forgotten that the carrier of phosphoric acid alone is a stimulant also, and continued cropping with acid phosphate alone and without sods tends gradually to soil-poverty.

The Mineral Fertilizers.—There is an inclination to class phosphoric acid and potash together in distinction from nitrogen when discussing the needs of plants, and this is due in part to our inability to distinguish the work of each element in producing crops. When grain is not plump or when fruit is not large and highly colored both of these elements may be needed by the soil. Sometimes, however, an application of acid phosphate or one of potash may give the results desired. Some clay soils are so full of available potash that the "best fertilizer" for that land would not contain any potash at all. In other cases the acid phosphate may free the soil potash, or an application of lime may do so. Experiment easily determines whether an application of potash is needed or not. Good tillage frees all the elements, and commercial fertilizers should be tested only in connection with good tillage. The whole matter is one of experimentation.

That Which Pays.—The final test in all business transactions is that of actual net income. We must drop consideration of "brands" and manufacturers' names. The composition of "brands" may change, and manufacturers may be handling everything from nitrate of soda to tankage. It is the figures that tell the story. By them we learn what we are getting, though even then we do not always know how quickly available the plant-food may be.

We learn to secure all possible nitrogen through home manures and the legumes. Where it is abundant in these sources little nitrogen is bought, and that only to push growth in the cold spring. We depend pretty surely upon some need of phosphoric acid in our soils, because experiment has shown few exceptions. The need of potash we learn by field-tests. In such ways do we learn for ourselves what is the "best fertilizer" for our land and crops, and no other way is sure. David.

Alfalfa and Kafir-corn

I have been a reader of the Farm and Fireside for the past five years. I have received many valuable hints from your good writers, and feel that I should do a little in return.

I was raised in Ohio on a farm. I have done mixed farming all my life, as I am now doing here in Kansas. I wish to call the attention of your readers to two crops—namely, alfalfa and Kafir-corn—not so generally known and raised over all of the territory where your paper is read.

Alfalfa has already established a reputation for itself in California, Utah and Colorado, and is being raised here in Kansas by the thousands of acres, but this grand crop has not reached the experimental stage in many states yet. I advise all farmers to sow an acre this spring, and another acre early next fall. Gamble on one half bushel of alfalfa-seed, which should sow about two acres, and I will venture to say that eight out of every ten farmers who prepare the ground as for oats or wheat and follow directions will acknowledge that they have discovered the best plant ever raised.

It will make at least four times as much and as good hay as any ordinary clover. The same may be said of it as a hog-pasture. Alfalfa is as early as blue-grass, and continues growing until hard frosts. If you have a hog-pasture of this kind you don't need rape. If the field is big enough, say six acres, and you have forty hogs you can mow the alfalfa every month from June 1st until October 1st. The last cutting should be kept to feed to the hogs during winter.

Don't sow alfalfa with wheat or oats. Sow it alone. The ground must be very fine, well packed and level. Sow a little later than oats. Sow from fifteen to twenty pounds to the acre.

When sowing alfalfa on upland, clay land that is liable to spew up, the most favorable ground should be chosen. Dry, naturally well-drained land is best. It should do well on any loamy, sandy bottom-land.

If sown in the spring the mower must be run over the field at least two times to keep weeds down the first year. Fall-sown alfalfa is more easily and cheaply started; no crop is lost, as you can use wheat, oats or potato land.

For best hay alfalfa must be mowed as soon as one half of the bloom is out. As the next crop comes immediately, you mow it every month. It should be put in a barn or shed, or in a narrow, high stack topped with long hay.

Kafir-corn for grain and rough feed is a fine crop to raise. The farmers here found this out more than ever last year, as the continued drought cut the corn crop short. Kafir-corn in many localities made from thirty to fifty bushels of seed and four tons of good fodder to the acre. In Kansas on slope or upland Kafir-corn is the safest crop.

This crop should also be planted more generally over new territory. As the seed is about the size of cane-seed, a small quantity will plant an acre or two. Near a town the sparrows work on it, but farmers should not let the sparrows be the boss.

Plant a few acres and you will have feed for chickens, cattle, hogs, sheep and horses. Plow the land, harrow it fine, and roll it if necessary. You can plant it with a wheat-drill by using both outside holes and one middle one, stopping up all the others. Work the same as corn, and cut with the binder or by hand. Haul it to the barn, break off the heads and store them in barrels, boxes or a crib. White Kafir is the best variety. W. L. Seeling.

Kansas.

The Catalpa Speciosa

[continued from page 3]

Southern states. Those few people who knew of the valuable qualities of Catalpa speciosa urged its cultivation, and hundreds of people supposing that Bignonioides was the variety mentioned planted it, only to be sadly disappointed in it.

How Catalpa Speciosa Grows Catalpa speciosa is a soft wood, and all soft woods that I am acquainted with, with the exception of this one, are of little value except for inside work. What gives catalpa wood its remarkable durability is not yet well understood, but experience has proven it to be far more durable than oak, both in the ground and above it. It grows very rapidly from seed. I planted some seed in a piece of rich soil, and many of the plants reached a height of five feet that season. The seedlings have an immense tap-root that goes deep into the ground and makes the digging of the seedlings, if well grown, no easy task. The wood of these young trees has much the appearance of cottonwood, and one would judge it to be of little value, but as the trees increase in size the wood becomes more dense, though never hard like oak. No matter how dry it becomes it never is hard to cut or drive nails into, and for this reason it would make a much better post than oak, even if it did not last three or four times as long as oak.

How to Plant Catalpa Speciosa This is the wood for farmers to grow. If they would plant a billion trees this year it would mean that the country would soon be a billion dollars richer. If you can buy the seedlings, buy them. They can be had for about three dollars a thousand. If you cannot afford seedlings buy an ounce of seed, sow it in drills in rich soil, keep all weeds out, and next spring set the trees where they are to stand. Whether you buy the seedlings or seed be sure that they are Speciosa. Be doubly sure of it. If you have a rough spot or a side-hill cover it with this valuable tree. Set them about six by eight feet apart, and when they reach post-size cut out each alternate tree, leaving them eight by twelve feet apart. The catalpa must have room. It will not bear crowding after it gets up thirty feet or so. The seed is winged like maple-seed and should be covered about an inch deep. Drop them about six inches apart. If the seed does not all appear sound drop two in a hill. If planted where they are to stand permanently drop three in a place, and pull out all but one plant when a foot high. Both seed and seedlings can be had at the leading nurseries. Fred Grundy.

Silos and Silage

Experience has demonstrated that there is no other way in which corn, and in many cases clover, cow-peas and sorghum, can be so cheaply harvested or saved with so little loss as in the silo. And there is no feed known which is less harmful to the cow and her product than good silage, and no feed that can be produced so cheaply. Of course, it does not furnish a complete ration; there should be some dry fodder fed with it, the same as there should be dry fodder fed on pasture, and in addition there should be more or less grain fed.—Hoard's Dairyman.

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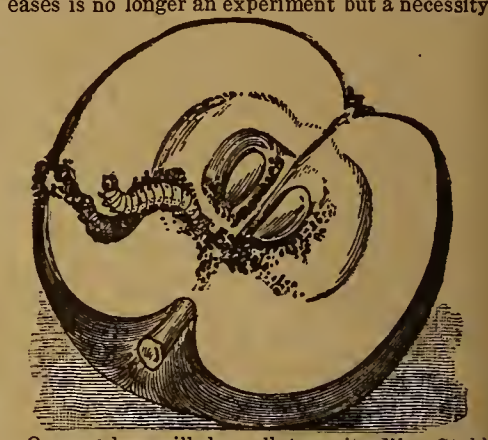

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How a Japanese Farmer Became a Baron

[CONTINUED FROM PAGE 1]

long before his retainers followed him. Three hundred and fifty families with nothing but their clothes landed in a new world, their only resources being their hands—just their bare hands. There was plenty of lumber, and the ground needed nothing but a seed, and in a short time it would return it many fold; but the toil and hardships can never be described. The lord and his good wife donned the garb of the peasant and led in a harder battle than he had ever faced before. To hear the details of those struggles from his own lips is a privilege worth a trip to Japan. Space will not admit of their repetition; suffice it to say that he spent his last dollar standing between starvation and his men until the first crops could be gathered, and at the same time he toiled from sunrise until dark as a field-hand, cutting down trees, plowing and harvesting, shrinking from nothing that would encourage the people to succeed.

The land was divided into plots, a portion given to each family to own and work with the expectation that he would make the very most of it. Thus a settlement was formed bearing his name, and to-day a village of some twenty thousand prosperous citizens tells the tale of the wisdom and foresight of this wise man. When the ground was cleared and laid out, a goodly section was staked out for house and grounds of the lord. In good time their prosperous condition made it possible for these men, who still considered themselves retainers, to contribute a sufficient amount to build a comfortable house for their benefactor, which stands to-day as a monument of their gratitude.

THE BARON FARMER

The house is situated in a fine, large grove of well-grown trees, with kitchen, garden and orchard at one side. The lower part of the building is in foreign style, and the chambers are built after the manner of Japanese architecture. Here this noble couple live among those who loved and defended them in times past, and whose loyalty now finds expression in unnumbered ways. When the lord is about to take a long journey every man sends a dollar to the house as a contribution toward his comfort while away.

The most remarkable part of the story is the manner in which these unskilled men were able to adjust themselves to new conditions. In all Japan I have seen nothing in the farming regions that indicates so much prosperity, and their home comforts surpass anything known on the main island.

The land and climate seemed especially suited to the growth of the indigo-plant, and the production of this useful and profitable article of commerce forms the chief occupation of the people. The fields are very beautiful when in flower. The plant is said to be "nearest of kin" to the weed commonly known in America as smartweed. The flower is the same graceful spray, about two shades darker in color, and the green leaves somewhat larger and more numerous. The ground is prepared in like manner for grain, and the seed is sown by hand in rows. The plant yields two crops of leaves and one of seed. The first leaves are taken off early in the season, and the last growth is harvested in October, when the seeds are also gathered. The green leaves when crushed in the hands leave an ugly bluish color very difficult to remove.

The preparation of indigo is very simple and profitable. The first picking of leaves are gathered and dried some days in the sun. The second crop is cut, tied into bunches and hung up beside the house to dry. The seeds are stripped and rolled in the hands to remove the scaly cover, and put into bags for the next sowing-time. When dried perfectly the green leaves are put into vats and covered with water until they reach a point near fermentation. The leaves are then removed, and the liquid is placed in a heated place to distil—a process requiring about one hundred days. By this time the whole is reduced to a substance about the consistency of partly dried soap. It is removed from the vat in this form, cut into cakes and placed in the sun to dry.

Great quantities of indigo are consumed in Japan, it being used as a dye for all their cottons. It is the prevailing color in common cloth. All coolies' winter clothes are of this color, and the work-clothes of the common people are the same shade. Tons of it are consumed yearly, and this farming community has become prosperous through their efforts to bring indigo to the highest cultivation.

What of the "Samarai" spirit among these people? Has cultivating the soil degraded them? No, indeed. In a number of the farm-houses the now horny-handed, large-hearted farmer brought out his priceless treasures—his sword of battle with which he defended his lord, and his small sword with which he stood ready to redeem his own honor. One old farmer with the head of a statesman showed me the sword he carried as chief attendant to the Lord of Sendai, and with which he slew two of their deadly foes. It is seven hundred years old, having descended from his ancestors. With great pride he brought forth the old spear, and, demonstrating by many a clever flourish the manner in which he had goaded the enemy to death, said he would refuse to part with it even for rice. Their swords especially are held as priceless.

What about Lord Sendai? Seeing what he had done to settle the colony and open up the country, as well as increasing the resources and aiding two thousand people to become prosperous citizens instead of helpless dependents, the Emperor summoned Lord Date into his presence and conferred the title of Baron upon him. The honor was accepted, and upon state occasions, in the uniform of his rank, this man, who by choice became a peasant farmer, but who was made the baron farmer of Japan, takes his place among the acknowledged nobility of the land.

Correspondence

From Tennessee.—We came here from the North about eight years ago, and have become accustomed to Southern people and their ways, and to the climate and the soil. We have found the people not at all had to live by. They take the world easy, but that gives the man with push a better chance to make a living. The climate is good. There are no extremes of temperature, and if you choose you can live out of doors nine months out of the year. This is the best place on earth for persons with weak lungs. The soil is different from that in the North in that it has been so neglected. Most of the people who try to farm this country are tenants. They don't like to cultivate very well, and they hate to put fertilizer on other people's land, so they rent a place on shares to get a roof to shelter them, and "manage somehow." If men would come here with a little capital and buy this land—it can be bought very cheap—give it a little honest fertilizer, and keep it covered with peas, rye or some other crop, so that it won't wash, they will, after a few years, have good, rich land, worth twice what they paid for it. You may not like it here at first, because the North and South are different, but after you have been here a little while and learned how to live in the South you will never wish to go back. F. D.

Sherman Heights, Hamilton Co., Tenn.

From California.—I have spent twenty-seven years here farming, stock-raising, fruit-raising and in the nursery business. I think this is the best state in the Union. The climate is good and the soil is good and cheap. Land here in the valleys which will produce one hundred bushels of oats an acre can be bought for seventy-five to eighty dollars an acre. Grazing-land, all hills and well fenced, where cattle will live all winter without being fed, can be bought for fifteen to twenty dollars an acre within twenty miles of Oakland. E. I. S.

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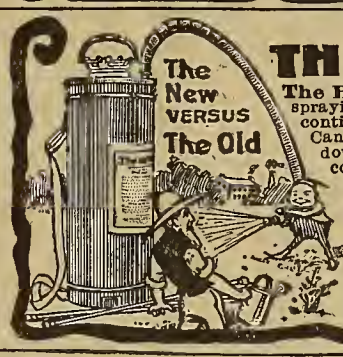

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Notes From Garden and Field

Beets and Carrots for Seed.—C. G., a California reader, asks me how to raise carrots and beets for seed. In order to be able to raise a few ounces or a few pounds of seed for home use I never take any particular pains about raising the roots, but just grow them along with those wanted for table use or feeding in exactly the same manner, then select nice, perfect specimens for seed, and winter them over in a pit or in the cellar, keeping them cool enough so that they will not sprout until after they are planted out in open ground in early spring. Any available spot in the garden or elsewhere is good enough for such seed crops, as the ground need not be excessively rich for them. It is easy enough to grow these and similar seeds. The greater trick is to clean them properly. I usually plant roots for seed in rows, with a three-foot distance between the rows, and four to six inches space between the carrots in the rows, or more between beets. When most of the seeds on a plant are ripe the top is cut off, gathered up, taken under shelter to cure, and then threshed or pounded out. The proper cleaning is of the utmost importance when seed is grown for sale. It is a business that has to be learned. To get nice, clean carrot-seed, it has to be threshed with some care—that is, with moderate force—so as to avoid breaking the little sticks, which can then be separated from the seed by means of running through sieves of different sizes, beginning with a No. 4 and gradually running down to No. 10 or whatever may suit the size of the seed. Rubbing by hand through a No. 10 sieve will remove most of the furze, or beard. Any one, however, who desires to engage in seed-growing as a business has too much at stake to go into it without trying to get a clear understanding of all the methods and practices of professional seed-growers. It will not do for any one to engage in any new business on a commercial scale without previous training or without the help of a trained person. If you just keep one or two colonies of bees you would probably find it even then to your advantage and profit to study up, and seek information on, the best ways of managing them; but nobody would blame you very much if you were going it blind, and letting the bees have their owu way, possibly relying on what you can learn of the business by observation and practice. But when you wish to make a business of bee-keeping and honey-raising you must first of all learn all about it, as you have too much at stake to go it blind. And so it is with the business of raising garden-seeds. Visit neighbors or other people who are engaged in the same lines. Read Brill's book on "Farm Gardening and Seed-Growing" (which, by the way, is the only practical treatise that I know of which gives full instructions for growing all kinds of garden-seeds), or engage a workman, at least for a while, who has had practical training in the business.

Selecting Seed Stock.—The climate in California is very different from ours in western New York. Undoubtedly seed stock there has to be handled somewhat differently from the way we handle it here. It takes us the entire season, or nearly so, to grow the root from which to produce the seed the next year. With parsnips and salsify we have a comparatively easy task. We might leave the plants over winter right in the ground where we grew them the summer before, and let them go to seed, and possibly this might be done in California with carrots and beets, especially if they are started from seed rather late in the season. But there comes another question—namely, selecting seed stock. What Mr. Brill says in the following about selecting beet-roots for seed applies with equal force, or in a greater or lesser degree also, to selecting roots of carrot, parsnip, salsify and other vegetables. "Great pains," says Brill, "should be taken in selecting to reserve only such as possess the peculiar marks which distinguish the variety. The foliage of beets will assist in a great measure to make selections; hence it is well to go over the bed and remove all that show any signs of impurity before the main crop is pulled." In regard to the gathering and cleaning of beet-seed Brill says, "The seed is always ripe before the stalks are dry. Small lots may be stripped by hand, but a quantity can best be removed by threshing with a flail. When the seeds are separated from the stalks they should be spread thinly in a loft for a week or more, after which they may be run through the fan-mill and stored in barrels until wanted for packing, when they should again pass through the fan-mill and be finished with a No. 10 sieve to remove the sand or dust, picking out what sticks there may be by hand."

Planting Carrots.—I appreciate carrots, both for the table and for stock-food. The few rows which I ordinarily plant in the home garden give me the several bushels of carrots which I desire to store in the cellar for culinary purposes during the winter, and for an occasional tidbit for my Belgian hares. They are planted with other small garden stuff—onions, radishes, lettuce, table-beets, etc. I have often made the rows for them, especially the more dwarfish sorts (Short Horn, etc.) only twelve to fourteen inches apart, but find it advisable to give a little more room, and now usually make the rows for carrots, as also for table-beets, parsnips, etc., eighteen inches apart. The cultivation in this case is all done with the hand wheel-hoe. For large-scale operations I think I would increase the distance between the rows possibly up to two feet, and in California even to two and one half feet.

Buggy Peas.—A good many people are eating buggy peas without knowing it. Our Alaskas are usually entirely free from every trace of bugs. This may be because they are planted so early that they come to bloom while the weather is yet too chilly for bugs to fly and sting them. At least I do not imagine that there is anything in the Alaska pea which the weevils do not like. The later peas, however, are seldom entirely free from bugs, and sometimes they are badly stung. For that reason all green peas are carefully sorted over before they are put on to cook, all suspicious-looking ones being rejected. It may be taken as a fact that when you plant peas with live bugs in them, or any kind of peas in the vicinity where peas with bugs in them are being planted, you will grow buggy peas. It is not necessary for any one, either, to plant peas with live bugs when it is so easy to kill the undesired visitors. All seed-peas should be subjected to the bisulphid-of-carbon treatment before being planted, preferably soon after they are harvested and threshed. Druggists now sell bisulphid put up in tin cans, from one-pound size up. Put the peas in a tight box or barrel, place a saucer upon them, pour a quantity of the bad-smelling liquid into this, and keep the box or barrel tightly closed for twenty-four hours. It will mean the death of every bug inside.

T. Greiner.

Orchard and Small Fruits

CONDUCTED BY SAMUEL B. GREEN

Inquiries Answered

Bismarck Apple.—J. J. P., Bellflower, Ill. The Bismarck apple, in my opinion, is not hardy enough for planting in central Illinois. Neither is the variety especially good in this country, although in England I found that some of the growers had taken a fancy to it. The few plants that I had of it died out a number of years ago from winter-killing. If you experiment with it at all, do so in a small way.

Holly.—P. S., Mt. Pisgah, Ohio. The common native holly can be grown in southern Ohio in protected locations and will sometimes do exceedingly well. If you want to keep the foliage good it is desirable to protect it by shading with boughs. Of course, in order to accomplish this the trees must be kept small. It is customary to propagate it from berries. It prefers a moist, loamy soil, but in a suitable climate will grow upon almost any soil that is fairly well drained. Instead of trying to propagate it yourself it would probably be best for you to get a few plants from some nurseryman. This is hardier than the European holly, which is prettier and the kind grown in greenhouses.

Shade-trees — Strawberries — Hedge-plant for Lawn.—J. R. H., Marion, Kan. Among the most ornamental and best growing shade-trees that are hardy in your section are the soft maple, white elm and basswood, and these all do well in your section. The honey-locust, also a pretty tree, does well in Kansas and grows quite rapidly. The best form of it to get is that which has no thorns on it. This may be obtained from most of the nurseries.——If you have not had much experience with growing strawberries, and only want them for home use, I would suggest that you plant the Bederwood, or Bederwood and Crescent in alternate rows. The best gooseberries are probably Houghton and Downing.——The best hardy hedge-plant for your home lawn is probably the English buckthorn.

Crown-gall.—F. H. W., Colorado. The cherry-roots with the large irregular and decayed swellings at the surface of the ground have been carefully examined. Prof. Paddock, of the Colorado Experiment Station, thought from the description of the trees that very likely the roots suffered from too much irrigation-water in the soil, but your second letter would seem to dispose of this thought. The roots seem to be infested with some fungus disease or similar growth, which has produced the peculiar appearance known as crown-gall. Such growths are especially liable to occur in soil that is overwet, but sometimes they occur without regard to such conditions. It is a common trouble in many Northern states, but especially in the South and California. Trees that are badly infested should be dug up and destroyed, but those that are not seriously injured should have the swellings removed. Great care should be taken that all nursery stock planted out is free from this trouble. It is undoubtedly a communicable disease. I regret that I cannot recommend you a course of treatment that will undoubtedly relieve you of this trouble, but none is known.

Red-cedar Seedlings.—D. G., Clifton, Kan. The red cedar is quite easily grown from seed in the following way: Gather the seed at any time after it is ripe. The winter is as good a time as any for this purpose. Soak it for twenty-four hours in strong potash or soda lye, or mix with wood-ashes for a few days, then rub it against a fine sieve until the fleshy meat has come off from around the seed. Mix the seed with sand and leave outdoors until spring, and then sow it in rows six inches apart in beds four feet wide, and cover with about four inches of hay and straw. Allow this to remain over the seeds until the following spring, when it should be removed very early. The plants will be found pushing up through the soil about as soon as the ground thaws out. This means that the seed must remain in the ground for about one year before it starts. If you think there is danger of the seed being injured in the soil by squirrels or other rodents it might be well for you to let it remain in the sand buried out of doors until the next spring and then sow very early, but in my own experience I follow the way first given and get excellent results. Although we are somewhat troubled by mice, birds and squirrels they seldom get any of our red-cedar seed.

Peach on Prune Stock—Pruning Grafts—Apricots Dropping.—M. B. E., Oregon. While the peach will graft on the Hungarian prune and make a fairly good union, yet I should much prefer to have them on their own roots in a commercial orchard. There is a large amount of work connected with the work of grafting and the care of the grafts until they are well started, and even then many of the unions will be poor and unsatisfactory, and in a few years they will, I fear, begin breaking off. I think the best way would be to take out the Hungarian prunes and set out thrifty one-year peach-buds.——When you trim in the spring you should remove all the wood except that which comes from the grafts. Except, perhaps, in cases where the tree would, by this treatment, be one-sided, when additional grafts should be put in so as to make the top well-balanced. In the setting of grafts and in the care of them afterward there is an opportunity for considerable good judgment to be exercised in getting the grafts in the right place, and then in so pruning as to get a good-shaped top to the tree. It is a poor plan to trim in the spring just as the sap is starting, but pruning should be done before growth starts at all, say during mild days in the latter part of the winter, or else be deferred until June after the trees are nearly in full leaf.——If the peaches are in flower at the same time as the apricots, then undoubtedly the falling of the flowers is not due to frost injury. I do not know why it is that the fruit drops when the size of a pea, but think it probably due to the lack of proper pollen. You perhaps know that many trees need to be crossed—pollenized with the pollen from some other variety—in order to have the fruit mature perfectly, and it is so, to some extent at least, with most of the apricots. And likewise with some of our pears, apples and plums. The pruning of the trees in May would not make them any more liable to set fruit. Pruning at that season of the year would have a tendency to prevent their flowering, but I take it from what you say that they flower profusely every year. The driving of rusty nails into the tree-trunks will not help them any about producing fruit. This idea seems to be widely prevalent, but really amounts to very little. To this extent, however, it sometimes assists in bringing trees into bearing, in that it checks their growth sufficiently so that they form fruit-buds instead of leaf-buds; but the same results can be obtained in a better way by the cutting off a small strip of bark about the tree, or by running the saw around the tree, cutting just through the bark. But your tree does not need any such treatment, since it flowers every year, and the only trouble is that it drops its fruit. I think if I were in your place I should plant some other variety of apricot among those which you now have growing, and it is quite probable that when they come into flower that they all will be productive.

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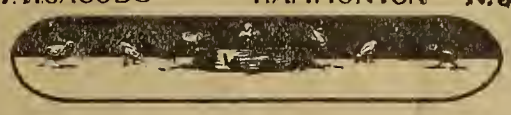

Sudden Death of Fowls

For a fowl to be fat and plump it is requisite that the degree of fatness ought not to exceed a certain condition—not to surpass the limit between health and disease. If so, the functions of the bird will be interfered with, and it will be exposed to sudden death. In the case where a fowl receives high feeding and but little exercise the fat accumulates in the tissues, not in the constituents of the organ, but in the intestines. Thus it invades the spaces which separate the muscular fibers themselves; in the liver the hepatic cells are choked. But so long as the accumulation of fat is not excessive the functions of the organs will not be affected. But if the barrier be once crossed between health and disease the fat becomes a part, or constituent, of the cell, takes its place gradually, and finally destroys the organ. The accumulation of fat especially attacks the action of the heart, diminishing its energy and proving an obstacle to the contraction and the circulation of its nourishing vessels. Lastly, the fibers of the muscles of respiration become saturated with fat, and the fullness and the frequency of the breathings being lessened the fat cannot be consumed, and so it accumulates. Sudden death may result from the rupture of the heart or of the oviduct. The remedy is to give neither too much nor too little food; diminish the supply when the birds want exercise, and rely more on green food. Feed more generously during laying-time, but not in a manner to transform food into fat.

Use Plenty of Grit

Fowls swallow their food, broken or not, and it enters the crop, or first stomach, and remains in it until it has become more or less softened, when a small quantity at a time (just as grain runs into a grist-mill) is forced into the gizzard among the gravel stones. This gizzard is a strong, muscular organ, and works night and day when there is a grist to grind, contracting and expanding, thus forcing the gravel stones into the grain, breaking it to fragments and triturating the whole mass, after which the food is in a suitable condition to be quickly digested.

Feeding Chicks

Chicks should at first be fed little and often upon wholesome, plain food. For the first week they should be fed every three hours, the first meal being given about half-past six o'clock in the morning and the last one about eight o'clock at night. From the time the chicks are a week old until they reach one month they will have to be fed about four times a day, and after this, until they are four months old, three meals a day will be sufficient. Thousands of chicks die every year from the result of overfeeding.

Feeding Ducks

Ducks are great farm scavengers, eating much that cannot otherwise be utilized. Vegetable-trimmings, potato-parings, bread-scraps and meat when mixed with a little bran make a dish highly relished. It does not matter how much water there is in it, for they will fish out all the food. They will eat shells and gravel when put in a pail of water, and if any grain is fed throw it into the water also and let them hunt for it.

Sitting Hens

When placing eggs under a sitting hen use the thermometer. After the eggs have been in the nest four or five hours place the thermometer under the hen, among the eggs, for a few minutes, then quickly withdraw it and look for the record. If less than one hundred and three degrees then the hen does not impart sufficient heat. Hens vary in giving heat to the eggs, and some of them therefore cannot hatch out a full brood.

Variety of Food

A variety of good, substantial food, consisting of equal parts of wheat, corn, buckwheat and a scalded mash of wheat-bran, middlings, ground corn and oats, with some ground green bone or meat-scraps, is a good ration for laying hens. Plenty of grit at all times is an absolute necessity.

Diseases in Flocks

No matter how good a bird may be, or how perfect it may appear in any respect, if it has the slightest sign of disease it must not be kept with the others. It would not be necessary to destroy a bird that had a cold, because this can be cured; but a bird that shows any signs of disease of the lungs, liver or any vital organs, or if the blood is impure, then it is much better to kill it at once. Almost all diseases are due to overfeeding, rich feeding, bad quarters, damp, cold or ill-ventilated houses, lack of exercise, combined with an improper system of feeding, or close inbreeding, which results in the enfeeblement of the system. If good, healthy stock-birds are used, if the houses are well built, dry and properly ventilated, if the feeding is suitable, and if the fowls are well and carefully looked after, then disease among poultry will be very exceptional. Disease is very often brought into a poultry-yard by the introduction of fresh stock. It should be a strict rule with poultrymen that whenever a fresh bird is brought into the poultry-yard it should be kept by itself for at least a week or ten days, during which time it should be well dusted several times with disinfecting-powder; and it should also be carefully observed at this time to see that it is, so far as can be ascertained, in perfect health.

Nest-eggs

One of the things a poultryman should not do is to use rotten eggs for nest-eggs. They get broken sooner or later and foul the nest. As soon as this happens lice appear, and their entrance into the dirty nest means the overrunning of the entire poultry-house in a very short time. Another evil is that such eggs find their way to market, often through mistake. Porcelain eggs are cheap and answer the purpose, but in winter they are very cold and should be covered with white muslin.

Loss of Chicks

Over one half of the chicks hatched die before they reach three months of age, rats, cats, dogs and other enemies, as well as disease and exposure, causing the loss, but more die from the attacks of lice than from anything else. The poultry-house should be thoroughly cleaned, and kept so. Once a week it should be closed and sulphur burned therein. Lice rapidly multiply, and unless vigilance is exercised it will not be profitable to attempt to raise chickens.

Inquiries Answered

Cut Bone.—J. A. E., Strom, Va., writes: "Where can I obtain cut bone?"

ANSWER:—It is usually kept in stock by all dealers in poultry supplies. It will be an advantage to purchase a bone-cutter.

Plan of Poultry-house.—A. P., Berry, La., writes: "Please give plan for poultry-house and also for brooding chicks."

ANSWER:—It is difficult to suggest a plan, as each individual has his preferences. Our "New and Complete Poultry Book" contains many designs and also an excellent plan for a brooder.

Dark Brahmas.—G. F. R., Gregson, Mont., writes: "I intend to purchase some Dark Brahmas, and would like to have the main markings."

ANSWER:—They have pea-combs and are well feathered on the shanks, which should be yellow, and the ear-lobes are red. The cock has a black breast, with silver hackle and saddle and black tail. The hen is brown, with brown penciling.

Ducklings.—"Subscriber," Allen, Neb., writes: "1. How should ducklings be fed? 2. Are they kept from water? 3. Will they thrive if hatched by hens as well as by ducks?"

ANSWER:—1. They should be fed four times a day the first month, and three times a day thereafter, on soft food. Use boiled turnips or potatoes thickened with equal parts of corn-meal, bran and ground meat. 2. No water is required for them except for drinking. 3. They thrive well with hens.

Duck and Goose Eggs.—E. L. K., Grapecreek, Ill., writes: "Will duck and goose eggs hatch as well in an incubator as under hens? Does it require four weeks, and can they be hatched together?"

ANSWER:—They will do as well in an incubator as under hens. They require the same length of time, but should not be incubated together, as the larger goose-eggs will be nearer the source of heat than the duck-eggs, and hence subjected to a higher temperature.

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unsalable vegetables, result from want of

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Questions from regular subscribers of FARM AND FIRESIDE relating to matters of general interest will be answered in these columns free of charge. Querists desiring immediate replies, or asking information upon matters of personal interest only, should inclose stamps for return postage. The full name and post-office address of the inquirer should accompany each query, in order that we may answer by mail if necessary. Queries must be received at least TWO WEEKS before the date of the issue in which the answer is expected. Queries should not be written on paper containing matters of business, and should be written on one side of the paper only.

To Eradicate Poison-ivy.—D. H., Bangall, N. Y. Answering your query we republish the following from a bulletin of the Department of Agriculture, entitled "The Principal Poisonous Plants of the United States:" "Many individuals are practically immune from the effects of toxicodendron. Advantage should be taken of this fact to employ such individuals to remove these plants from the vicinity of dwellings and from playgrounds. Much of the work would be purely mechanical, consisting in rooting the plants up by main force. This is the most certain method; the use of concentrated sulphuric acid is attended with less danger, as the plants do not need to be touched. One half teaspoonful should be applied to the stem every two or three weeks in the springtime, when the plant is growing most vigorously. Care should be taken to keep the acid away from the skin, as it is most highly corrosive. The brush should in no case be left upon the ground nor used for fuel, and in burning it in the field pains should be taken not to inhale the smoke nor to handle the wood any more than necessary. The greatest care should be exercised in preventing workmen from transferring the oil from their clothes and hands to other individuals. To accomplish this object special suits should be worn, and the hands should be washed several times a day with an alcoholic sugar-of-lead solution. Bathing in hot water with strong soap-suds is also strongly recommended. The clothing must also be well washed, and it is always well to remember that towels may be a means of conveying the oil."

To Get Rid of Fleas in the House.—G. C. B., Caswell, Ala. A bulletin of the Division of Entomology, United States Department of Agriculture, entitled "The Principal Household Insects of the United States," gives the following remedies for fleas in the house: "Flea larvae will not develop successfully in situations where they are likely to be disturbed. That they will develop in the dust in cracks in floors which are not frequently swept has been observed by the writer. The overrunning of houses in summer during the temporary absence of the occupants is undoubtedly due to the development of a brood of fleas from eggs which have been dropped by some pet dog or cat. This overrunning is more liable to occur in moist than excessively dry summer weather, and is more likely to occur during the absence of the occupants of the house, for the reason that the floors do not under such circumstances receive their customary sweeping. The use of carpets or straw matting, in our opinion, favor their development under the circumstances above mentioned. The young larvae are so slender and so active that they readily penetrate the interstices of both sorts of coverings, and find an abiding-place in some crack where they are not likely to be disturbed. That it is not difficult to destroy this flea in its early stages is shown by the difficulty we have had in rearing it; but to destroy the adult flea is another matter. Their extreme activity and great hardiness render any but the most strenuous measures unsuccessful. In such cases we have tried a number of the ordinarily recommended remedies in vain. Even the persistent use of California buhach and other pyrethrum powders, and, what seems still stranger, a free sprinkling of floor-mattings with benzene were ineffectual in one particular case of extreme infestation. As a palliative measure the plan adopted by Professor Gage in the McGraw building of Cornell University may be worth trying. Professor Gage, tied sheets of sticky fly-paper, with the sticky side out, around the legs of the janitor of the building, who then for several hours walked up and down the floor of the infested room, with the result that all, or nearly all, the fleas jumped on his ankles, as they always do, and were caught by the fly-paper."

VETERINARY

CONDUCTED BY DR. H. J. DETMERS

About Belgian Hares.—H. G., Outlook, Wash. I cannot answer your questions.

A Crippled Horse.—J. J. C. May it be that your horse has been nerved? If so, there will be no remedy. Have the horse examined by a veterinarian.

Garget.—L. C., Eudora, Kan. What you describe is a case of garget. More frequent and more thorough milking, thus removing all the clots, constitutes the remedy.

Begin Suddenly to Run.—J. C. C., Morristown, Tenn. I cannot tell you what may induce your cattle suddenly to run away from their feed when eating, because there is nothing whatever in your communication indicating a possible cause or inducement. May it be that they are repeatedly frightened by a dog, or by rats for instance?

May be Navicular Disease.—S. F., Oakland, Md. What you inquire about may be a case of navicular disease, but as you give no description whatever it is impossible to make a diagnosis. All I can do is to advise you to consult the FARM AND FIRESIDE of November 1, 1901, or to have your horse examined by a veterinarian.

Swelling Beneath the Lower Jaw.—S. S. N., Wartburg, Tenn. A doughy (edematous) swelling beneath the lower jaw of cattle and sheep is not a disease itself, but only a symptom of the existence of a so-called cachectic disease in its last and usually fatal stage, in which it has come to dropsical effusions (accumulations of blood-serum) in the large cavities of the body and beneath the skin. Especially in young cattle and in sheep it is most frequently some worm disease—for instance, the morbid process caused by liver-flukes—that produces such dropsical effusions when in its last and fatal stage.

Three Pigs Died Under Peculiar Symptoms.—L. C., Dixon, Neb. The symptoms of your pigs as far as you gave them—namely, "at first being stupid, then quivering; moving jaws as if chewing with jaws partly set; drooling at the mouth (salivation) when in these fits; inability to stand up, and hard to force mouth open"—would point toward poisoning, and so would the short duration of their sickness; and only the fact that the three pigs did not take sick at the same time, but one day apart, if I interpret your statements correctly, would be somewhat against the diagnosis of poisoning. Outside of this the symptoms mentioned rather strongly point toward acute lead-poisoning. May it be that you have been painting, and that the pigs have had access to a pot with white lead?

Bruised Hind Pastern.—I. S. S., Bucleton P. O., N. Y. When your colt slipped and got caught with a hind foot between the bottom of the stable door and sill the part between the hoof and pastern-joint now swelled was probably more or less severely bruised, and may be sprained. If you had immediately made continued applications of cold water, and had given the colt absolute rest, I have no doubt all swelling and soreness would have disappeared before this time. As it is now, I would advise you to apply three or four times a day some gentle friction with the palm of the hand to the swelled parts, and thus aid in restoring a normal circulation of the blood, but to refrain from making any applications of sharp, or acrid, substances, as they will increase the inflammation. Strict rest is indispensable.

Collar Sore or Boil.—J. J. A., Itasca, Wis. First throw away or burn your sweat-pad. It only causes additional pressure upon the sore place, and most effectively prevents any healing. If you cannot give rest to your horse until a healing has been effected, use a breast-collar that does not come in contact with the sore place; and if you cannot do that, take your neck-collar to the harness-maker and request him to remove the stuffing at that place at which it comes in contact with the sore in such a way that a concavity will be produced where it covers the sore, and to remove thus every and all contact with, and pressure upon, the latter. If there is luxuriant granulation (so-called proud flesh), remove or destroy it by one or two applications of a little finely powdered sulphate of copper. Besides this, keep collar and shoulders scrupulously clean.

So-called Ear-worm.—W. D., Grant Mills, N. Y. First tie a small and fine sponge—a so-called surgeons' sponge—to the end of a stick, dissolve one half ounce of acetum plumbi in one and one half pints of water, and with this and by means of the sponge clean in a most thorough manner all the nooks and the whole interior surface of the external ears of your dog. When you have done this, press out your sponge, and remove with the nearly dry sponge all the fluid yet in the ear. If you find sore or excoriated places or spots, paint them over by means of a camel's-hair pencil with a two-per-cent solution of nitrate of silver. Repeat this treatment once a day until healing sets in. If your dog should shake his head and flap his ears very much, and not stop this after the first or second wash, make him a cap of muslin with two pockets fitting his ears, put the cap on his head with the ears in the pockets, and then with strings fastened to the ends of the pockets tie the cap to his head in such a way that the ears are on top of the latter, and therefore cannot be flapped.

Infectious Abortion.—H. M. B., Litchfield, Neb. If you wish to use carbolic acid as a disinfectant in cases of infectious abortion of cattle, it should be used as an injection into the vagina and uterus of a cow that has aborted, not any stronger than a one-per-cent solution, while for a disinfection of tail and external genitals it may be used as strong as a three-per-cent solution if applied in the shape of a wash. To disinfect inanimate things a concentrated, or five-per-cent, solution will be the most effective. Where the micro-organisms which cause the abortion have already invaded the internal genital organs of a cow with calf measures of prevention are out of the question. Where this is not the case, all cows with calf kept in an infected stable or on infected premises should at once be removed to a non-infected place, and be kept there until they have calved and until the infected stable or premises have been reliably disinfected.

So-called Warbles.—A. M. S., Hulet, Wis. What you inquire about are so-called warbles, at this season of the year very frequent on cattle, but particularly on young animals. If you look a little closely you will find a roundish hole in the center of the swelling, and if you press at the base of the swelling you will succeed in forcing the larva, or grub, from the inside of the swelling through the hole, and thus get it out. If this is done the swelling will readily disappear and the hole will close. But as soon as the larva drops out be sure to crush it under your foot, because if you do not the larva will burrow into the ground, where it will in due time develop into a pupa, and the latter into a fly known as Oestrus bovis. Next summer this fly will trouble your cattle, will cause them to run, and will drop its eggs among the hair. The embryos, though at first very small, will work their way through the skin, and in time will there develop to large larvae, or grubs, so that as a consequence your cattle next winter will be full of warbles again. On young cattle especially these warbles are not seldom so numerous and so close together as to cause a complete separation between the skin and the parts beneath all over the back and the sides of the animal, and may thus cause the death of the latter. This can be prevented if the farmers will take upon them the slight trouble of pressing the larvae out of the warbles of their cattle before the larvae have arrived at full maturity, and then promptly kill the larvae.

Incontinence of Milk.—H. B., Marshlands, Pa. If your Jersey cow cannot retain the milk, but lets it go between milking-times, there are two possibilities. Either the pressure of the accumulated milk in the udder becomes so great that the contractile fibers at the end of the teats cannot withstand the pressure and yield the same as they do when artificial pressure is brought to bear in milking, or else the contractile fibers are absolutely too weak and yield to comparatively slight pressure. If the first constitutes the cause, the remedy consists in more frequent milking, and in thus reducing the pressure caused by too great an accumulation of the milk. Milk your cow for a while at least once every six hours instead of every twelve hours, and you will very likely find that the contractile fibers, if never exposed to an undue pressure by the accumulated milk, will soon gain strength enough to be able to keep the teats closed if the milking is done at regular intervals once every eight hours. Irregular milking must, of course, be avoided. Even if the contractile fibers are absolutely too weak, this frequent milking will have a good effect. Besides this, all kinds of sloppy, soft and relaxing food must be avoided, and only good, solid and nutritious food, but particularly sufficient quantities of good hay, must be fed, even if thereby the quantity of milk should be reduced. If it is desired to do more, astringent solutions may be applied to the ends of the teats after each milking, but the effect of these are rather uncertain.

Foamy Milk Refusing to Yield Butter.—J. P. A., McCune, Kan. What you complain of may possibly be due to a defective diet, as it is claimed that certain kinds of food, especially if spoiled and innutritious when fed to the cows, may have such an effect, but in the vast majority of cases the real cause will be found to consist in an invasion of certain bacteria into the milk. This either takes place in the stable while the milk is exposed in the pail or in the place in which the milk is kept afterward. If it is known where the infection occurs it will be sufficient to thoroughly clean and disinfect that place. If it is not known it will be advisable not only to clean and disinfect the stable and the premises and milk-vessels in which the milk is kept, but also to wash the udders of the cows before each milking, and to do the milking only with perfectly clean and dry hands. It is further claimed that the temperature of the premises in which the milk is kept may have something to do with it, but it is far more likely, especially as most of these cases occur in the winter or in cold weather, that poor ventilation or foul and contaminated air is at fault. It is also more or less difficult to get butter if the cows are too old or too near calving. To find the real cause in a given case requires very often a most thorough and searching investigation. If the cows, in consequence of having been fed with too much spoiled and innutritious food, should suffer from chronic indigestion, one half ounce of muriatic acid, given twice a day for a few successive days with the water for drinking, has often a good effect.

Probably a Roarer.—M. and B., Ness City, Kan. What you describe appears to be a roarer. As has been explained quite recently in these columns, roaring of horses may be caused by any obstruction in the respiratory passages almost anywhere from the nostrils down to the entrance of the trachea (windpipe) into the chest, but also, and that quite often, by a paralysis or a destruction of one of the recurrent nerves, which have the office of governing the actions of some small muscles, the contraction of which causes a separation, or drawing apart, of the arytenoid cartilages, and thus an opening of the larnyx. Where this constitutes the cause the roaring can, but will not in all cases, be cured by a surgical operation, consisting in an extirpation of the unmoved arytenoid cartilage. If an obstruction somewhere in the respiratory passage causes the roaring, a cure is possible only if the obstruction is not of a malignant character, and therefore will not reappear after it has been removed, and at the same time is sufficiently accessible to make its extirpation possible. Therefore, unless the roaring is caused by a temporary swelling produced by a cause that has ceased to act, and in consequence will disappear without any treatment, roaring cannot be cured by any medication, but only by a surgical operation. It is incurable in all cases in which, for one reason or another, the necessary operation cannot be performed. As to your case, neither the nature of the cause nor the seat of the same can be learned from your inquiry; consequently, before anything can be done the nature and exact seat of the cause have to be ascertained by a careful examination, to be made by a competent veterinarian.

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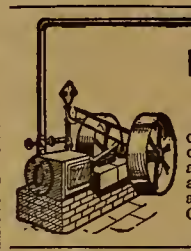

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THE GRANGE

Conducted by Mrs. Mary E. Lee, New Plymouth, Ohio

Religion, morality and knowledge being necessary to good government and the happiness of mankind, schools and the means of education shall be forever encouraged.—Dr. Manasseh Cutler.

Current Comment

Pandora's Season All are familiar with the Grecian myth of the creation of the world. After all animals had been created and endowed by Epimetheus, so runs the legend, it was found there was no superior gift left for man. Accordingly Prometheus sought to help his brother Epimetheus out of his dilemma. He flew to Jupiter's abode, and lighted his torch at the chariot of the sun, and brought fire to man, thus enabling him to conquer all things. Jupiter, in his anger at such base use of his prerogative, sent Pandora (which means "all-gifted," "all-endowed") to punish man. But the gods thwarted his purpose by equipping her with all the graces and mental powers which should make her beautiful, powerful and beloved. But one trait Jupiter fastened upon her—that of curiosity. Seeing a jar in the home of Epimetheus (to whom she had been sent), and knowing that it was forbidden her to open it, she refrained for a time. But at last her curiosity overcame her discretiou, and she opened the mysterious jar. To her horror there escaped all the ills and vices to which man is heir. Hope alone she succeeded in imprisoning. Aud that benevolent gift she ever after sought to visit upon man.

Beneficent springtime, so pregnant with joy, hope, endeavor, zeal and energy, rich with its promises of that which is to be, full of beauty, grace, power, loveliness and the various charms that woo and soothe and heal, is but typical of the "all-gifted" Pandora. That this glorious time will bring health to the sick, wealth to the industrious, hope to the disappointed, energy, zeal and ambition to the indifferent, is our wish.

"Biting Off More Than We Can Chew" "Biting off more than we can chew" is a vulgar but expressive phrase. Each summer finds the ambitious workers resolving never again to undertake more than they can do well. Yet each recurring spring finds more ambitious plans indoors and out than the year before witnessed. Our judgment tells us to undertake less and do our work better; but greed crowds in—here a little, there a little—till we find the average man or woman overloaded with work, cross, fretful, discouraged.

Such people are public nuisances, and ought to be abated. We vote for the stocks or pillory, where they might be confined, giving them time to ponder on their ill deeds, and act as a warning to others. Confidentially, here at Glen Lee we are planning to raise just a little more forage and grain, put up more fruit and vegetables, have finer flowers and more company than ever before. Let others take warning and do as we say, not as we do.

Faith in Our Calling A young farmer friend of ours is an inspiration and a tonic. He farms because he loves the business and has faith in it. He goes to his work with the same zeal and enthusiasm that animate the chemist thirsting for new light on his theme. He is contented with nothing but the best. His chickens, cattle, horses and sheep are carefully culled and selected. They are furnished with nutritious food and comfortable quarters. His plans are well laid to raise the best crops and increase the fertility of his farm. He reads the best books and agricultural papers. Nor does he neglect the social and spiritual side of his life. He has a prodigious memory. Above all, he respects the calling he has chosen, and does what he can, perhaps unconsciously, to cause others to respect it. His house is well furnished, his family is well dressed. To see him one would imagine him a business man, as indeed he is—a business farmer. Such men will do wonders toward developing agriculture and gaining respect for the business.

Sympathy I speak of the above because it is an instance in point of that chain of sympathy which binds men together. Sympathy is the animus of all fraternal feeling, the foundation of all society. The good seek the good, the evil seek the evil. The enthusiast in whatever calling discovers his brother by intuition. The rose-lover discerns the rose-lover, and immediately the bond of sympathy unites them. Others are found. They rejoice to come together and feast their eyes on the beauties they have created and developed. In time this mutual love for one flower brings men together in a national union. This widens into an international society of enthusiasts, all striving to perfect the queen of beauty. It is to these enthusiastic lovers of the rose that we owe a vast debt of gratitude for the magnificent specimens we have to-day.

We find the same sequence in every field we enter. Recognition of identity of interests, co-operation, and last of all perfection of type and form. What a debt the world owes to these eager workers, who sacrifice non-essentials for the essential, forget their narrow prejudices in their common interests, who idealize a type and work in common to make it a practical realization.

Organization a Logical Sequence Organization is the logical sequence of the sympathy that must of necessity exist between men of high sensibilities in the same calling. If the interest in, and the love for, the business is marked then will those who are engaged in it come together naturally. They will not be kept apart. They love their work, and it is essential to their happiness to meet with those who share the same feeling. Among such people you will find beautiful homes, comfortably and artistically furnished. If farmers, their cattle, sheep and horses evidence loving attention. There will be a high social life. Circles and clubs will be organized. The churches, even in a small community, will be attractively decorated. The ministers are men of high order and sterling worth. The schools also bear the imprint of an intelligent management. In very many cases the grange is the social and intellectual center of the neighborhood. The best element in the town and the like element in the country meet naturally in a social way. Their mutual worth and intelligence is mutually recognized. From such communities come leaders in thought and enterprise.

The young people throng the colleges. There is a desire for the beautiful, and for the wider horizon that travel gives. And there is skill and energy developed necessary to secure the money to furnish these enjoyments. A good, active, harmonious grange in a community is a pretty sure indication of a high type of mental, spiritual and civic righteousness. The absence of any social center, any club or circle, is the truest history of a community devoid of the finer feelings of humanity. Each individual and each neighborhood writes its own chronicles in lines too faithful to be questioned.

Postgraduate Work in Agriculture and Horticulture In 1900 the Ohio State University suggested that a summer school for postgraduate work in agriculture and horticulture be established. The school was to be held at some college, but not as a part of the work of that college. The idea met with favor at the hands of the Association of American Agricultural Colleges and Experiment Stations. Dr. A. C. True, Director of the Office of Experiment Stations, Washington, D. C., has been chosen Dean of the new school. Its first session is to be held at the Ohio State University from July 7th to August 1st.

This marks a grand stride forward in agricultural education. It is a tacit recognition of the fact that teachers of agriculture must receive the same postgraduate training that instructors in other lines of work have.

The New Order Under the new order of things, when agriculture receives such generous recognition, and men of the highest worth, keen, shrewd, with academic and university training, enter the agricultural field, what will become of the careless, self-satisfied, know-it-all kind of farmer. In this, as in other instances, the law of the survival of the fittest will find ample vindication. And as of yore, the weakling, crowded to the wall by his own indifference, will denounce fate, society, laws, the government, everything and all things save the real cause of his own undoing—himself.

To Study Horticulture The Thos. Meehan Co. has established a school of horticulture for the benefit of their employees. Any one, from the merest boy to the oldest man, if desirous to learn, can have the advantage of good teachers free. The school is held at night. The company evidently believes it is cheaper to educate their employees, and of necessity later on pay higher wages, than have ignorant help. And yet there are farmers who ridicule the idea of a boy attending an agricultural college or in any way fitting himself for the duties of life.

A Good Report In another place we present an ideal, concise report of a successful grange, by Fannie H. Gilmore. We would be glad to have such reports from other granges. Tell us something of your history, what you have done to make your grange strong, of your entertainments and discussions—give us the kernel. Patrons all over the United States are anxious for just such news. An ounce of actual results accomplished is worth a ton of theorizing.

Hon. F. A. Derthick

Among the leaders of agriculture none are more earnest, zealous and successful than Hon. F. A. Derthick, Master of the Ohio State Grange. Mr. Derthick has been for years an agricultural writer, lecturer and chairman of the executive committee of the state grange. His election as master was the recognition of a long and honorable public service. He was Ohio's first Dairy and Food Commissioner. He has always been foremost in the fight against the fraud in oleo, and in favor of pure food products.

A gentleman by nature, a scholar by cultivation, a successful business man, an earnest Christian, Mr. Derthick is typical of the best there is in American farm-life. Frank, open, honest, generous, with a boundless sympathy for those who are struggling, he has won the love and esteem of those who best know him. He is an able and forceful speaker. He never resorts to tricks, subterfuges or oratorical flourishes. It is the worth of what he has to say that holds the audience. Whether before a crowd of farmers, a legislative committee, a college audience, he controls by force of what he is. Such men are a power in the world.

A Live Question

Mrs. E. F. D., Michigan, writes: "We have a grange, organized last spring, with fifty-two charter members. Fifteen new ones have been added. How can we make our meetings interesting and profitable? We want our grange to be one of the best."

Will those who have live, energetic and profitable granges please answer? A few short succinct accounts would be helpful.

Colorado's Banner Grange

At the meeting of the Colorado State Grange held in Denver this year it was found that Clearcreek Valley No. 4, of Arvada, came to the front as the largest by a majority of four. The grange at Fort Collins was a close second. The present master of our grange has filled that office for twenty-three years, and our lecturer is also state lecturer.

There are now quite a number of young men and women members who are making practical use of the information gained and exchanged. They are mostly fruit-growers and gardeners, and find a ready market for their products in Denver. They also ship quite a large amount to Central, Blackhawk and Georgetown. They are all mining towns and pay profitable prices.

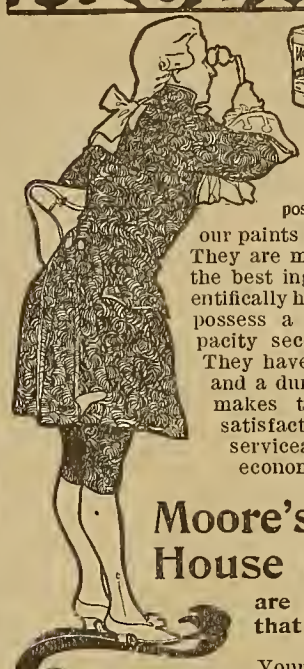
During the past winter we had meetings every week, alternating afternoon and evening. The afternoon meetings were devoted to discussions, plans for co-operative buying, committee reports, etc. The evening meetings were chiefly musical and literary, with some degree-work. The fourth-degree meetings are usually all-day sessions—that is, from ten o'clock until about four o'clock. Often some other grange is invited, and State Master J. A. Newcomb is nearly always present. The ladies are noted for the feasts they provide. The fact that nearly all those who join stay with us proves that they find food for the mind as well as the body.

We have the advantage of an interurban line into Denver, which makes it convenient to attend the state and Pomona granges held there. All these things help to keep up the growing interest in our grange.

One of our most important works has been to keep saloons out of Arvada and vicinity. The commissioners recognize us as of considerable importance, and thus far have always given our resolutions all the consideration we have desired. Our committees keep informed about county affairs, and their reports are very interesting. So it will be seen our order is very much alive. We now have a membership of one hundred and nineteen.

FANNIE H. GILMORE.

FAULTLESS



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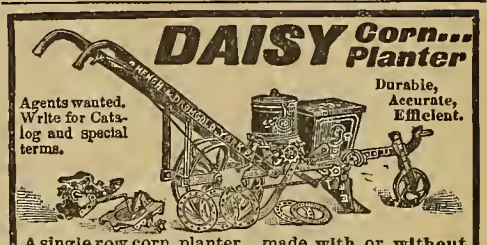

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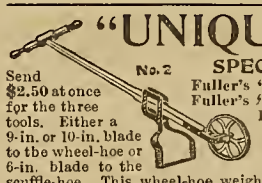

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DECORATIVE SCHEMES

BY P. W. HUMPHREYS

Healthculturists may croak as they please concerning the hygiene of what they term "stuffy draperies," yet in these days of artistic home furnishings drapery will still continue its softening effect about our multitudinous doors. Especially is this true where the home may be made on a prosperous farm. However many portieres we may hang, we cannot dispense entirely with doors, and the number absolutely necessary makes the hall of a "roomy home" look very much like a steamer with its row of state-rooms.

For the ordinary door something may be done by hanging a curtain inside the door-frame on the hall side. On a door usually kept closed, like a store-room door, a long rug may be hung, against which may be fastened a brass plaque or other oriental property.

The best thing for the doors with panes of glass in them is to cover the space filled with glass with a panel of some decorative material stretched very tightly, the edge covered with narrow molding painted or stained to match the door. For a plain material denim is as good as anything. Japanese leather-paper is most effective, and there are cretonnes almost as beautiful as a water-color. On one of a number of doors near together one might cover the obnoxious ground glass with a panel of looking-glass framed in a narrow molding. A Boston artist has a door entirely covered with a sheet of looking-glass, over which is hung a bamboo portiere, giving the effect of a vista into another room. In treating the different doors one should aim at variety. It is a great help to divide the length of the hall by a curtain, a tall screen or any open-work partition.

The insides of the doors must be covered with something in harmony with the prevailing colors of the bedrooms to which they belong. For a blue room try a piece of dark blue crape figured with white, and use it for a background for a few unframed etchings. Against a panel of green denim fine water-color reproduction of landscapes in low tones, or studies of flowers in white or yellow. A sconce with a ground mirror, with candles matching the ground in color, may be hung upon the door with good effect. Avoid lace or muslin arrangements as savoring of the vestibules.

Transoms are of no use except to accumulate dust, but they are an article of faith with some builders. If you really believe in the ventilating value of a transom, remove the window entirely and supply its place with a silk curtain, which will flutter to and fro not unpleasantly. You may cover the transom entirely and cover the opening with a drapery, which will be a good background, and just below it may fix a shelf which will hold a plaster cast or two and a pot of some bright-colored ware. Sometimes there is light enough in the hall to admit of having a jar filled with long sprays of German ivy or Tradescantia growing in water set upon such a shelf. Again you may conceal your transom with a mass of the dried palm-leaves which are sold in the oriental shops. Or a panel of fretwork may take the place of the discarded window, and the transom will be used as a ventilator. When two transoms come close together, try the shelf and drapery arrangement for one and the palms for the other, arranging the latter so they will rest partly against the drapery. Against the inner, or flat, side of the transom you may with advantage hang a picture of such shape and size as to entirely conceal the opening and its frame, fastening it flatly against the wall.

An attractive arrangement was recently completed for a store-room door which opened into a bedroom. The transom was first covered with a drapery, which served as a background for a shelf full of oriental pottery. The bedroom couch was then stood against the door, which being one of the high-backed affairs covered nearly half of the door, and between the couch and the transom shelf book-shelves were fastened to the door. When the books and ornaments were in place on these shelves no one would imagine that a door and a transom were thus deftly concealed. As the shelves were firmly fastened to the door, when it was necessary to enter the store-room it was an easy matter to wheel the couch aside and open the door carefully without displacing the books or the drapery which hung between the lower shelf and the couch.

Pope Innocent Lace

Abbreviations:—K, knit; o, over; n, narrow; p, purl; p 2 tog, purl two together.

Cast on 33 stitches, and knit across plain.

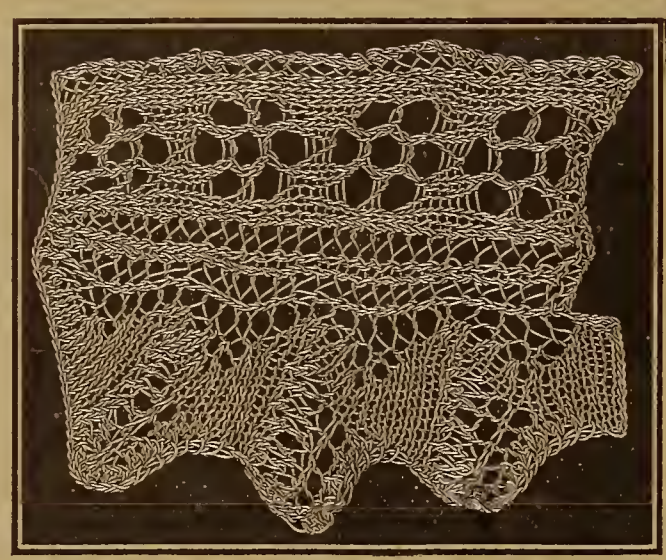
First row—Slip 1, k 1, o, n, k 10, o, n, k 1, o, n, o, k 2, * n twice, (o, k 1) four times, n twice.

Second row—Slip 1, p 15, o, p 2 tog, p 1, o, p 2 tog, p 10, o, p 2 tog, k 1.

Third row—Slip 1, k 1, o, n, k 3, n, o twice, n, k 3, o, n, k 1, o, n, o, k 3. Repeat from * in the first row.

Fourth row—Slip 1, p 16, o, p 2 tog, p 1, o, p 2 tog, p 4, k 1, p 5, o, p 2 tog, k 1.

Fifth row—Slip 1, k 1, o, n, k 1, n, o twice, n, n, o twice, n, k 1, o, n, k 1, o, n, o, k 1, o, k 3. Repeat from *.



Sixth row—Slip 1, p 18, o, p 2 tog, p 1, o, p 2 tog, p 2, k 1, p 3, k 1, p 3, o, p 2 tog, k 1.

Seventh row—Slip 1, k 1, o, n, k 3, n, o twice, n, k 3, o, n, k 1, o, n, o, k 1, o, k 1. o, k 4. Repeat from *.

Eighth row—Slip 1, p 21, o, p 2 tog, p 1, o, p 2 tog, p 4, k 1, p 5, o, p 2 tog, k 1.

Ninth row—Slip 1, k 1, o, n, k 1, n, o twice, n, n, o twice, n, k 1, o, n, k 1, o, n, o, k 1, o, k 1, o, k 1, o, k 6. Repeat from *.

Tenth row—Slip 1, p 25, o, p 2 tog, p 1, o, p 2 tog, p 2, k 1, p 3, k 1, p 3, o, p 2 tog, k 1.

Eleventh row—Slip 1, k 1, o, n, k 3, n, o twice, n, k 3, o, n, k 1, o, n, o, k 13. Repeat from *.

Twelfth row—Slip 1, p 26, o, p 2 tog, p 1, o, p 2 tog, p 4, k 1, p 5, o, p 2 tog, k 1.

Thirteenth row—Slip 1, p 1, o, n, k 10, o, n, k 1, o, n, o, n. Knit the rest plain.

Fourteenth row—Bind off 12 stitches, p 14, o, p 2 tog, p 1, o, p 2 tog, p 10, o, p 2 tog, k 1.

Joyce Cavendish.

Dainty Dishes

When oranges are in season they appear on many tables every morning, and delicious as they may be, novel methods of serving surely add to their palatableness. They may be peeled carefully and then have the sections pulled apart from the tip to the center of each orange. If this is neatly done, and the skin is not broken, the oranges may be arranged on a fancy plate, either with or without a bed of lettuce-leaves, so that they will closely resemble full-blown roses.

Another novel method of serving for breakfast or lunch is to peel the orange, leaving an inch band of the peel around the center. This band is then cut through at one point, and the sections being separated the rind is laid out flat. When served in this manner it is intended that the sections shall be removed by, and eaten from, the fingers without sugar. This is a particularly nice way of serving mandarins and tangerines.

A variation from the orange baskets filled with jelly may be made by taking the pulp, which has been removed when the peel was cut in basket-shape, removing all the seeds, sprinkling with powdered sugar and a little lemon-juice, and putting into the baskets. These may be made much prettier by cutting a little slit in the top of each handle and inserting a tiny flower. For a children's party paper flowers might be used, but for other functions a tiny marguerite or a couple of violets would be suitable. The remainder of the juice and pulp left from this dish might be made into jelly, which if cut into cubes when cold would make a very handsome garnish for a plain corn-starch pudding.

Oysters as salads deserve to appear far more often than they do. To prepare one, quickly cook oysters for a few moments in their own liquor, drain them well, and then if they are not dry wipe them with a soft towel. Place the oysters on a platter, cover thickly with finely chopped celery, and then pour over them a rich mayonnaise. Garnish the mayonnaise with pimolas and capers. A very little minced onion added to the celery gives to this dish a particularly fine flavor.

Farmers' salad may be made one of the most attractive dishes of a lunch. Any and all kinds of cooked vegetables may be used for this, and there should be about equal quantities of each. Carrots, turnips, potatoes and beets should be chopped or cut in very small, fancy shapes. To one half cupful of each of these add one half cupful each of peas and string-beans. The beans should be cut in short lengths, and both these and the peas may be canned. Add also a little chopped ham, minced onion, chopped sweet pickles, small stoned olives and capers. Sprinkle with pepper and salt, add a little vinegar, and after mixing thoroughly set in a cool place for a couple of hours. At serving-time spread on crisp lettuce-leaves, cover with mayonnaise, and garnish with parsley.

Maple-sugar sauce, if well made, will make of the plainest of puddings a very dainty dessert. Break one half pound of maple sugar into small bits, and dissolve it in one cupful of cream. Let it boil slowly for a few moments until thoroughly blended and of the consistency of thick syrup. Do not stir more than is necessary to keep it from burning. Add a small piece of butter before removing from the stove. Rich milk may be used instead of cream, in which case more butter should be added and longer boiling will be required. If maple sugar is not easily to be procured, light brown sugar may be substituted with good effect.

Inez Redding.

How to Sweep With an Ordinary Broom Without Raising the Dust

If you make the dust fly it will fly up, so do not try to make it fly. Draw the broom slightly inclined, as you would a rake when raking near your feet. Do not use it as if it were a spade or a pitchfork, and vigorously dig up the dust and pitch it around over the furniture. Always "draw" the broom; never push it the fraction of an inch. Generally do not try to sweep the dirt from near your feet away from you, but sweep from out one side of you toward a place just in front of your feet; and never let the lower hand pass under in front of the upper, but keep the broom slightly inclined the same way till it is lifted from the floor. A good way for beginners will be not to sweep past the feet. Yet you can conveniently sweep on past you if you simply send the upper hand on further than the lower. "Why?" Because broom-splints are springy, and every splint is a spring, and when you begin to sweep, with the top of the broom-handle inclined forward as it should be, the pressure of the broom on the floor bends the splints backward and puts them in position to spring; and if you sweep the broom past you, so that it is inclined forward, as the springy splints are released the dust is thrown in the air by the springing of the splints.

Dust raised by the little breezes made in sweeping is chiefly made by sweeping through the air at the beginning or end of your forward stroke, and by swinging the broom back to the starting-place. Lift the broom well above the floor before you swing it back. If one desires to take more pains than pay, for the sake of doing perhaps a little better, try turning the back of the broom as you lift it from the floor, so that on its return swing it will pass through the air edge foremost, like a feathered oar. Touch, do not strike, it to the floor before you begin to sweep it forward, and lift it off without giving it the least bit of an onward fling as you do so. Too swift movement of the broom, even on the floor, raises a little breeze and dust. It may take more time to draw it rapidly than to jerk it, but it will save time in the end.

T.

Camphorated Oil

A simple home-made liniment that is almost magical in its results is composed of kerosene, camphor-gum and sweet-oil. Into a quart bottle put one pint of kerosene, and add as much camphor-gum as will dissolve, adding a little more day by day and shaking thoroughly. Then add one half pint of sweet-oil, shake well, and it is ready for use. It should be well corked and kept out of the way of children. Use for burns, cuts, bruises, stiff neck, stiff joints, sore throat, bunions, and about all the ailments that flesh is heir to, as it will cure, and that right speedily, almost everything; in our family it has gained the sobriquet of "cure-all."

Diamond Shell-lace

Abbreviations:—K, knit; p, purl; p 2 tog, purl two together; o, thread over; n, narrow.

Cast on 31 stitches, and knit across plain.

First row—K 2, fagot, k 5, n, o three times, n, k 6, fagot, k 6, n, o, k 1, o twice, p 1.

Second row—Fagot, k 9, fagot, k 8, drop the middle loop (as this is always done, no reference will be made to it again), p 1, k 6, fagot, k 2.

Third row—K 2, fagot, k 15, fagot, k 5, n, o, k 1, o, k 1, fagot.

Fourth row—Fagot, o, p 2 tog, k 8, fagot, k 15, fagot, k 2.

Fifth row—K 2, fagot, k 3, n, o, k 1, o, k 1, fagot, o, p 2 tog.

Sixth row—Fagot, (o, p 2 tog) twice, k 7, fagot, k 6, p 1, k 3, p 1, k 4, fagot, k 2.

Seventh row—K 2, fagot, k 15, fagot, k 3, n, o, k 1, o, k 1, fagot, (o, p 2 tog) twice.

Eighth row—Fagot, (o, p 2 tog) three times, k 6, fagot, k 15, fagot, k 2.

Ninth row—K 2, fagot, k 1, n, o three times, n twice, o three times, n twice, o three times, n, k 2, fagot, k 2, n, o, k 1, o, k 1, fagot, (o, p 2 tog) three times.

Tenth row—Fagot, (o, p 2 tog) four times, k 5, fagot, k 4, p 1, (k 3, p 1) twice, k 2, fagot, k 2.

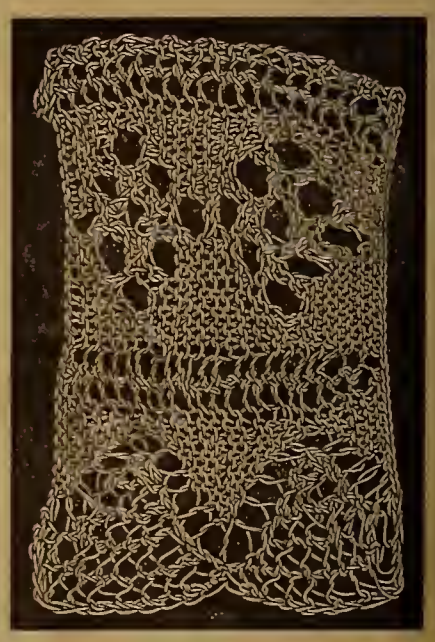
Eleventh row—K 2, fagot, k 15, fagot, k 1, n, o, k 1, o, k 1, fagot, (o, p 2 tog) four times.

Twelfth row—Fagot, (o, p 2 tog) five times, k 4, fagot, k 15, fagot, k 2.

Thirteenth row—K 2, fagot, k 3, n, o three times, n twice, o three times, n, k 4, fagot, k 3, o twice and p 3 tog, p 2 tog, (o, p 2 tog) four times.

Fourteenth row—Fagot, (o, p 2 tog) four times, k 4, fagot, k 6, p 1, k 3, p 1, k 4, fagot, k 2.

Fifteenth row—K 2, fagot, k 15, fagot, k 4, fagot, p 2 tog, (o p 2 tog) three times.



Sixteenth row—Fagot, (o, p 2 tog) three times, k 5, fagot, k 15, fagot, k 2.

Seventeenth row—K 2, fagot, k 5, n, o three times, n, k 6, fagot, k 5, fagot, p 2 tog, (o, p 2 tog) twice.

Eighteenth row—Fagot, (o, p 2 tog) twice, k 6, fagot, k 8, p 1, k 6, fagot, k 2.

Nineteenth row—K 2, fagot, k 15, fagot, k 6, fagot, p 2 tog, o, p 2 tog.

Twentieth row—Fagot, o, p 2 tog, k 7, fagot, k 15, fagot, k 2

Twenty-first row—K 2, fagot, k 15, fagot, k 7, fagot, p 2 tog.

Twenty-second row—Fagot, k 8, fagot, k 15, fagot, k 2.

Repeat from first row.

Joyce Cavendish.

Don't Scold

THE effect of constant faultfinding is to make the young who hear it unamiable, malicious and callous-hearted. It is the same as with other phases of good conduct we wish to teach our children. We must practise them. Do you believe if they never heard unkind words they would ever come to use them? A scolding mother is the destroyer of the morals of children, for after repeated tongue-lashings the children cease to strive for the good opinion of the faultfinder, since they see they strive in vain, and often learn to take pleasure in doing the very thing for which they have been reproved, and stolidly await the result with the consoling thought that "a scolding don't hurt, and a whipping won't last long."

Some of the most flagrantly disobedient children that I have ever known were reared under the influence of a scolding mother; one who scolded long and loudly for each and every offense, and threatened the most dreadful punishment if the offense was repeated. It was invariably repeated, and again a string of abusive language was indulged in, interlarded with more threats.

Many a mother who would not beat a child feels no compunctions to scold freely on all occasions, and onlookers in deciding between the beating mother and the scolding one accredit the scolding one with being the model one, while really she is always the most at fault; for in extreme cases a whipping may do a world of good, but a scolding is never of any benefit to a child. It is always the result of a loss of temper and control of self on the part of the scolder, and though it is not always ruinous, it is always out of place.

A much better way than either scolding or beating is to soberly and quietly reprove, and in an earnest talk gently and lovingly show the little culprit that he has done wrong. Such a talk usually carries more weight than a dozen scoldings or whippings administered in anger and received in the same spirit; for a child soon learns that a scolding is a fit of passion, and consequently the rash utterances of anger, meaning much less than a quiet talk. If only this truth might, like the sunlight, burn its way resistless into the consciousness of every mother, that sweet, gentle pity for the little culprit will do more to bring about the desired result than all the chidings and maledictions that can be hurled at the wrong-doer, the gentle course would be adopted instead of the more disastrous one of violent scolding.

Then, too, the habit grows on one until it is almost second nature; and as one grows old under and in full control of the scolding habit she does not, like wine, improve with age, and if for thirty or forty years a woman has been faultfinding and scolding it will not be easy to change to agreeable and gracious ways at seventy or eighty, and she will find herself in a position where "her room will always be preferable to her company."

A cheerful, happy home is the greatest safeguard against temptations for the young, and for this reason the discordant element of scolding should be kept out. Wherever the home is cheerful it is the abiding-place of love; such a home does not give to the world "fast" sons or frivolous daughters. MRS. W. L. TABOR.

German Lace—in Crochet

ABBREVIATIONS:—Ch, chain; tr, treble; p, picot; s c, single crochet; st, stitch.

Chain 13 stitches.

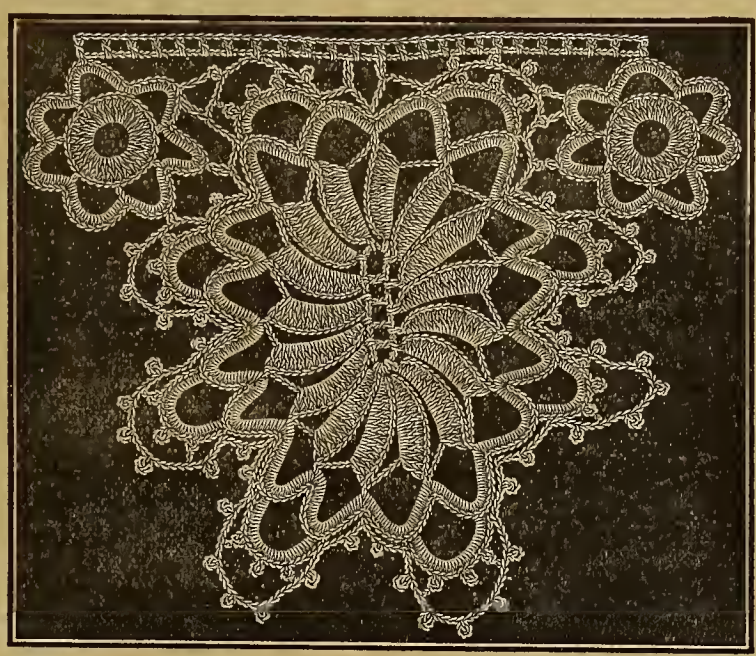
First row—One tr in fifth st of ch from hook. * Ch 1, miss one st, a tr in next. Repeat from * three times, cut thread and tie securely.

Second row—Ch 12, fasten with a slip st in the top of the last tr made in preceding row. * Under this ch make 1 s c, 15 tr; fasten the last tr in the fifth st of ch, counting from beginning of ch. Ch 12, ** fasten this ch on the end tr. Repeat from * to ** fifteen times. Arrange the tr clusters so that there will be five in each end space and three on each side—sixteen in all. After the last tr of this row is made slip st in the first st of the first ch 12 to join the row.

Third row—Ch 10, and fasten in the top of the last tr in next clusters of tr. Repeat from the beginning of row all around.

Fourth row—Make 17 s c under ch 10; make 8 s c under next ch loop. Ch 10, turn back and fasten with a slip st in the ninth s c of previous loop. Now cover the ch 10 with 4 s c, ch 4, catch back in first st of ch for a p, 3 s c, another p, 3 s c, a p, 4 s c. Make 8 s c in the next half loop. Repeat from the beginning of row.

Fifth row—Ch 7, catch back in fourth st for a p, ch 3, fasten in the joining of the outer scallop. Make another ch 7 with p, and fasten in the first p of outer scallop; * then ch 6, catch back in fourth st for p. Repeat from * twice, ch 1, miss 1 p and join to next ch 7; make a p, ch 3, and fasten where outer scallop is joined; make three more p of ch 7, join first in the depth of the next two scallops; join the second in the same place where the outer scallop is fastened, and the third in the first p of outer scallop. Repeat from first * around.



Join the rosettes at the sides by the center p of the 3 p over two of the outer scallops.

SMALL WHEELS.—Ch 11 stitches, join to form a ring.

First row—Work 29 tr under ring.

Second row—Ch 10, miss 3 tr, a s c in next. Repeat from beginning of row.

Third row—Cover each ch loop with 13 s c. Join the wheels to the rosettes while working them, or with needle and thread after they are made.

HEADING.—Fasten the thread in the upper scallop of the wheel, ch 15, miss a p, slip st in next ch 10, miss 2 p, fasten in next, ch 3, fasten in next p, ch 10, miss a p, fasten in next ch 12, fasten in scallop, ch 12, miss a p, fasten in next, ch 10, miss 1 p, slip st in next, and so continue to the end of row. Work back with ch 1, spaces.

These directions are easily followed with an occasional reference to the illustration. This is a handsome lace, and its uses will readily suggest themselves to the worker.

MRS. J. R. MACKINTOSH.

Simple Salads

Boil medium-sized beets until tender, and when cool cut in halves and scoop out the center, so that only a shell will remain. Fill this shell with vinegar, and let them stand for an hour. Turn out the vinegar and fill with finely chopped cabbage. Cover with a rich mayonnaise, and put each beet-shell in the center of a small white cabbage-leaf. If lettuce and celery are at hand the cups may be filled with chopped celery and placed on lettuce-leaves.

Slice thin some cold boiled potatoes, and mix with them one cupful of chopped celery and a large onion chopped fine. Marinate with a French dressing, and let it stand for a couple of hours in a cool place before serving. Garnish with pickled beets cut in fancy shapes.

Another method of making potato-salad is to cut the cold potatoes into cubes, sprinkle with finely chopped onions, lemon-juice, salt, pepper, and a little chopped parsley if it is at hand. Set in a cold place until ready to serve and then pile on lettuce-leaves. On the top of the potato in each lettuce-leaf sprinkle a little of the chopped white and sifted yolk of a hard-boiled egg.

By having in the house a can of salmon and one of small green peas, with a bottle of mayonnaise dressing, the ingredients for a dainty salad are always in readiness. Separate the salmon into smooth flakes, and flavor with lemon-juice, then place in the center of the salad-dish. Rinse the peas well, and add to them a little of the mayonnaise. Place them in small lettuce-leaves and arrange them as a garnish for the salmon, then pour the mayonnaise over the whole. The peas may be used as a border for the salmon if the lettuce is not at hand. In this case the garnish may be of eggs boiled hard and cut in rounds.

Chopped chicken mixed with chopped celery and made quite moist with a boiled dressing may be served on saltines or other thin, plain crackers without any garnish whatever. The remnants of any cooked chicken may be used for this, and it is especially nice to serve at lunches or simple teas.

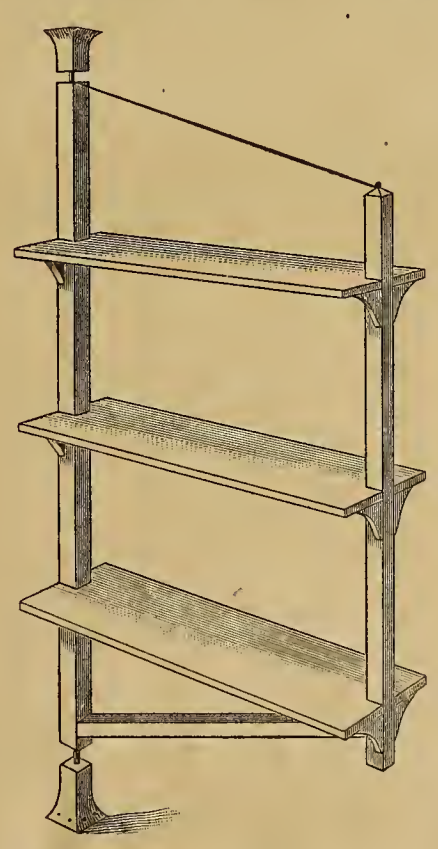
Chopped peanuts with thinly sliced apples make an excellent salad, and is much improved by adding a finely chopped scalded pepper from which the seeds have been removed. This may be served on lettuce or as a filling for sandwiches. The small leaves of cabbage may take the place of lettuce in almost any salad. INEZ REDDING.

A Plant-rack

The question of how to keep plants in the house during the winter, have them flourish, keep them from freezing on cold nights, and yet not have them take up too much room seems to puzzle a great many housekeepers. In my case it was solved by a neighbor, who had shelves constructed according to her ideas. I have her consent to describe the shelves for the benefit of others. This I will do, together with the additions and improvements made by my husband in constructing mine. Some of their good points are that they are light, cheap, strong, occupy but little space, and can be swung into the room on cold nights or whenever occasion demands.

My husband made three shelves seven inches wide, seven sixteenths of an inch thick and the width of the window in length. The ends were rounded nicely. To keep the shelves from warping or cracking he put narrow cleats under each one. He then took two pieces of wood, one and one fourth inches wide and of the same thickness, one being six feet long and the other about four feet. In either end of each shelf he cut out a piece one and one fourth inches wide and of the same length. That allowed the long pieces to fit into the shelves. Small iron brackets were then screwed under the shelves and to the upright pieces.

The swinging was accomplished in the following manner: Into either end of the longer upright a ferrule was driven, and in the center a hole bored, into which was slipped an iron pin, or a nail with its head taken off. The lower pin fitted into a hole bored in the top of a tripod, made of iron strips and fastened to the floor. The height



of the tripod can be made so as to bring the lowest shelf above, below or even with the window-sill, as desired.

The pin in the upper end of the upright plays in a bracket fastened to the window-casing. A hook fastens the shorter upright to the opposite casing, thus holding it in place more strongly. A strip of wood from the lower end of the longer upright to the opposite end of the lower shelf, and a wire or band of steel connecting the upper ends of the uprights, give additional strength.

The whole thing can then be painted, stained or completed in any desirable way. About the only expense is the wood, which many people have lying around in the form of unused lumber that might be used to advantage in this way. The tripod may also be made of wood. One lady said she would like her shelves wide enough to hold two rows of plants. Of course, that and many other alterations and improvements may be made according to the owner's taste and material. Vines hanging from shelf to shelf and trained across the top make it look like a screen of foliage and blossoms. The diagram here given may serve to make my description better understood.

MRS. W. G. H.

The Labor-saving Newspaper

To most busy housekeepers a newspaper after it is read is good only to wrap bundles in or to start fires. To be sure, these are very important uses, but there are countless others that the up-to-date woman employs in her kitchen. Many a woman, who thinks she is economical, would refuse to buy newspapers at five cents a bundle on the ground that it was throwing money away, and yet paper is the busy woman's labor-saver.

At most newspaper-offices you can buy a bundle of old newspapers for five cents. They are the exchanges that accumulate so rapidly even in the office of your county paper. Your editor exchanges with every other editor for miles around, and if he does not sell the old papers they find their way to the bonfire in the alley or the garbage-wagon.

First of all look carefully over the papers, or let the children do it, for pieces of poetry, bits of useful information, receipts and stories. Many a time I have cut from half a dozen newspapers enough material for "pieces to speak" to last one child all winter. I never save a poem just because it is a poem, but because it is appropriate and timely. Put them all into an envelope and you will have more than five cents' worth of satisfaction from them, owing to the fact that you can put your hands on a "piece" for John and Mary at a minute's notice. If your collection gets too large label the envelopes "Thanksgiving," "Christmas," or any other simple way that will save running through a hundred or more slips.

It is surprising how many interesting and enjoyable things are to be found in even a common newspaper. If you find in your bundle an edition of a big city daily, you have a veritable mine of amusement and profit, even though there is much that is worthless.

After they have been carefully looked over the papers are ready for service in the kitchen. They make an excellent covering for pantry-shelves and are better than oil-cloth, which is expensive and must be cleaned often. After the paper becomes too soiled for the shelves it is still good enough to place under pots and pans to keep them from marking the table, and when it has served a long term of usefulness in this capacity it will kindle fires as well as if perfectly clean.

For polishing stoves and cleaning windows the newspaper has no equal, and saves the trouble of keeping clean, soft cloths for the windows. The next time you wash windows crumple up a handful of soft paper and see what a shine you can give them. On baking-day a few papers spread around the table will keep the floor clean if you are unfortunate enough to be one of the cooks who "scatter."

Next fall try wrapping apples, cabbages and pears in paper and carefully packing them in boxes and barrels. You will find it very convenient to be able to take out vegetables and fruit when the weather is too cold to open the outdoor pits. Apples will keep till the following summer if carefully packed, and grapes until Christmas.

In cases of catarrh, consumption or even severe colds the safest thing to do is to use a paper to expectorate on rather than a cloth. Burn the paper at once, and thus keep the germs from doing more injury. Even a six-year-old child can be taught to lift up a lid on the stove and drop the paper in without burning himself. This method saves washing and ironing, while all danger of infecting other people is avoided.

On cold nights a layer of newspapers between the covers on the beds gives warmth without weighting down the sleeper. Many people put several thicknesses of paper in the bottoms of their shoes before going out in severe winter weather.

HILDA RICHMOND.

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See How Easy It is to Save a Diamond

You can open a Charge Account with us just as easily as you can open a savings-bank account. We deliver any Diamond which you select from our half million dollar stock when you open the account, then you can pay as small amounts monthly, just as you would put away a little of your earnings in a savings-bank each month. There is this difference—**savings-banks pay only three per cent, while Diamonds will pay at least twenty per cent this year.** Your local jeweler, if he is posted on Diamonds, will confirm this statement.

Honesty is the only qualification for credit—we do not ask for any security or guarantee, simply want to know that you are honest and will act in good faith. Dealings with us are strictly personal and confidential, and you may depend upon receiving fair, courteous and liberal treatment.

We will send for your inspection, prepaid, by express, any Diamond ring, brooch, locket, earrings, scarf-pin, cuff-buttons, or other article that you may wish to examine, and you may wear it at once on payment of a small portion of its value. The balance you may pay in small amounts monthly, as you can spare it from your earnings.

We are reliable, and our representations may be accepted without question. Our guarantee is good—you can satisfy yourself absolutely on this point if you will step into your local bank and ask how we stand in the business world. They will refer to their Dun or Bradstreet book of commercial ratings, and tell you that we stand very high, and that you may have perfect confidence in dealing with us.

We make liberal exchanges, and any Diamond bought of us may be exchanged for other goods or a larger diamond at any time. The interests of our patrons are safe-guarded at every point.

If you prefer to buy for cash we will allow you the regular trade discount of eight per cent, and give you a bill of sale, with the option of returning the Diamond at any time within one year and getting spot cash for full amount paid—less ten per cent, the reasonable cost of doing business. For example, you can wear a fifty-dollar Diamond for a whole year for five dollars, which is less than ten cents per week.

Remember that it costs you nothing to have Diamonds sent for your inspection—we pay all charges whether you buy or not. You cannot tell much about Diamonds from catalogue illustrations—you must see them and handle them to fully appreciate their beauty and quality.

Write to-day for **Catalogue "H,"** which explains everything, and shows prices, terms and full illustrations. We send to all inquirers our Souvenir Pocket Piece and Calendar.

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CORN, BEANS and ROSES

$1,000.00 in prizes will be given away by the publishers of the Farm and Fireside in a great crop-growing contest. See Page 19 of this issue for full particulars.

$300.00 IN CASH
A Handsome Buggy
A Fine Cultivator
A Set of Furniture
A Splendid Sewing-Machine

Also Hundreds of Other Prizes

All FREE in the great crop-growing contest described on Page 19 of this issue of the Farm and Fireside.

TWO RINGS FREE

Send name and address **no money**, and we will mail you 12 boxes of Comfort Cough Tablets. Will cure a cough in one day. Sell them for **10** cents a box. Send us the **$1.20** and we will mail you these two beautiful SOLID GOLD laid Rings. Will wear a lifetime. No money required till tablets are sold. We take back all not sold.

COMFORT MEDICINE CO., Providence, R. I.

ICE CREAM FREEZER 20c. 10c.

Crystal Flake makes Delicious Ice Cream, (used over 20 years by leading Confectioners). If not at your Grocer's send 10c for a package and free directions for making finest Ice Cream, and a practical 20c freezer. Address, Kingery Mfg. Co., B. 22, Cincinnati, Ohio.

BED-BUGS DOOMED

Of all the worries of the housekeeper the bed-bug is the worst. All will be thankful a remedy which absolutely rids a house of all bugs has been found. Mrs. Bertha Fremont, 432 Fourth, Des Moines, Iowa, is the discoverer. She will send a large sample, enough for three beds, for 15c., actual cost of postage, packing, etc. Her regular size is 50c. Every reader ought to send at once.

YOU DYE IN 30 MINUTES Soiled and faded clothing of all kinds made to look like new with the celebrated **TONK'S FRENCH DYES** So simple a child can use them, being twice the strength of other dyes, carpets and rugs retain their brilliancy for years, as the colors are permanent and **Will not Freeze, Boil or Wash Out.** To introduce them give your dealer's name and we will send you 6 large packages for 40c, or 1 for 10c, any color. Say whether for wool or cotton. Write quick, catalogue and color card free. Agents wanted. FRENCH DYE CO., Box 413, Vassar, Mich.

$12 A WEEK AND EXPENSES Paid men and women. Experience not necessary. Permanent Position. LENENE DRUG CO., Dept. 60, Parsons, Kan.

The Byme-by Man

I know a byme-by man
  I'll introduce to you,
And fancy many wives
  Will say, "I know him, too."
You'll find him on a farm
  (Inherited, you know),
For at earning money
  He is so very slow.

He meets you at the gate
  And greets you with a sigh;
Says he will mend that gate
  Some rainy day byme-by,
He's had so much to do
  He's had no time to spare;
It really seems to him
  He has a world of care.

Then, too, the whole porch floor
  Is rotted to the ground,
And gross neglect is seen
  In everything around.
He hastens to assert
  That things have gone awry,
There's been so much to do;
  He'll fix them up byme-by.

You'll find that he burns wood
  As green as it can be,
But promises his wife
  That next year she will see
He'll have good seasoned wood.
  Poor soul! she heaves a sigh.
She knows full well he'll break
  This promise by and by.

For thirty years and more
  Each year it's been just so,
With not a promise kept,
  Although years come and go.
And is it any wonder,
  When people hear him plan,
They shake their heads in doubt,
  For he's a byme-by man.

—Rose L. Bates, in Ohio Farmer.

The Needlework Guild of America

IN A recent issue of the FARM AND FIRESIDE is an interesting article on "Hand-sewing" and the revival of that most useful accomplishment among the girls of to-day. It has reminded me of the good work accomplished by the Needlework Guild of America, not only in the way of charity, but as a powerful factor in this very revival of an old-fashioned art.

Last November I had the good fortune to see the display of garments collected by the guild of a certain Ohio city, a total of thirty-five hundred, which included many hand-made garments as well as underclothing, stockings and a great variety of ready-made things. These have been distributed to the needy, and are at this moment doing service in many private and public homes of the city.

Its object as an association is "to collect and distribute new, plain, suitable garments to meet the great need of hospitals, homes and other charities, and to extend its usefulness by the organization of branches." It is based upon a similar society founded first in England. The first guild in this country was at Philadelphia in 1885. Few societies are freer from "red-tape," and all force goes directly to the main object. There is not so much as an annual fee, and the only requirement for membership is the contribution of two garments annually. As the interpretation of the word "garment" is left to individuals, the gift may be as costly or as inexpensive as conscience and pocket-books dictate.

Children are easily interested in the work, and for such an object will sew more willingly than upon any "stint" of patchwork. In more than one instance the very children who will receive garments from the guild contribute to the general collection of clothing, and so maintain their independence. In some cases teachers bought the goods, and poor children worked as eagerly as rich in giving the labor of their own hands.

In one notable instance the boys and girls of a public institution offered their services, and only stopped sewing when there was no more goods to sew. The boys who understood tailoring made small trousers; the girls made dresses, aprons, underclothing, etc. Before their donation was put on exhibition in the guild, previous to distribution, these boys and girls held an exhibition of their own, and viewed the work of their hands with all the pride of artists. Already they are talking of what they will do next year. These children belong to an afflicted class from whom little is expected, yet their sewing would have been a credit to any one, and their zeal was an inspiration to those who were inclined to be indifferent.

All garments were collected for general display before they were given out. This was more for convenience and system than for the sake of show.

BERTHA KNOWLTON.

Postponement

A short time ago a certain man was killed in a railroad accident. He had been a successful business man and had amassed quite a fortune, but although he had made many plans for the future he had got but little enjoyment out of life as he went along. True, there had been some things to trouble and vex him, but in spite of this he intended to be happy some time in the future and to place his money where it would do good. He died, and having postponed making his will his fortune went to those who would not only squander it, but would put it to the worst possible uses.

"This teaches us a lesson," said the man's friends. "We will take our comfort as we go along." And then they continued worrying and fretting about little foolish things, just as they had been doing before the accident taught them the "lesson."

We are all prone to make good resolutions, and having made them feel that there is nothing more to do. Then we continue on in the same old way until something happens to shock us and set us thinking again.

It is all very well to plan for the future. There is much pleasure and satisfaction in having a definite object in view and in working for it. But none of us know what the future holds in store, so it is the part of wisdom to enjoy all we can from day to day. If good things come to us we shall have an increased capacity for enjoying them, and if failure and disappointment are our lot we shall have the satisfaction of knowing that when prospects were brighter we did not fret and worry over trivial matters, but formed the habit of getting all the pleasure out of life, so that even when things look dark we can still extract some happiness from each day's experience.

There are so many chances that we let slip by, and for what reason? Because we are worrying about little foolish things that a month hence will have passed forever from our memory, but the influence of which, in that they strengthen our habit of worrying, will be lasting and injurious.

Suppose we should begin each day with the determination to live up to our opportunities in the fullest possible measure; see and appreciate all the beauty that comes in our way, enjoy our homes that we work so hard to maintain, look for the good in those we meet, and take pleasure in the kindly, helpful acts that come under our notice, and seize every opportunity to do and say the best that is in us.

Many of us are only half alive. To live fully, to be alive to all that is beautiful in the world, to try to make the most of each day as it comes—will not this help to make the world a brighter, healthier and happier place? SUSAN BROWN ROBBINS.

Origin of Flower Names

There are many charming stories and bits of description connected with the names of our common flowers. The ancients saw in the three-lobed leaves of the hepatica a resemblance to the form of the liver, hence its name from the Greek word for liver.

The pungent and beautifully colored nasturtium receives its name from two Latin words. The first of these is nasus, meaning nose, and the second is the participle tortus, which means twist. The plant was given this name of nose-twister because of its pungent smell and taste. The odor may have then been stronger. In the nasturtium of to-day it is agreeable.

The word trillium means triple. In the trillium, growing freely in our woodlands and blossoming in early May, we find three large netted-veined leaves surmounted by a single flower. This has three green sepals and three petals, these last being white or pale pink. The pretty name of wake-robin is often given to the trillium, but instead of waking the robins their songs always precede its blossoming.

All lovers of the wild flowers are familiar with the dainty wood-anemone. The flower-stalk is slender, and the blossom dances and nods in the wind. The word anemone comes from the Greek animos, meaning wind. This term was applied to it because of the long-prevalent idea that the flowers opened only when the wind blew.

We find several authorities giving the origin of the name Solomon's-seal to be a peculiarity of the root-stock. This is marked at short intervals by circular, seal-like scars left by the stems of previous years. This explanation is plausible, only we are still in the dark as to why the name of the great Solomon is connected with it.

Dandelion means tooth of the lion, from the sharp indentures of the leaf. The fuchsia received its name from a German botanist, Leonard Fuchs. HOPE DARING.

For all who have weak Lungs

An old physician, retired from practice, had placed in his hands by an East India missionary the formula of a simple vegetable remedy for the speedy and permanent cure of Consumption, Bronchitis, Catarrh, Asthma and all Throat and Lung Affections, also a positive and radical cure for Nervous Debility and all Nervous Complaints. Having tested its wonderful curative powers in thousands of cases, and desiring to relieve human suffering I will send free of charge to all who wish it, this recipe, in German, French or English, with full directions for preparing and using. Sent by mail, by addressing, with stamp, naming the paper.

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Lines

What care I for caste or creed?
It is the deed, it is the deed;
What for class or what for clan?
It is the man, it is the man;
Heirs of love and joy and woe,
Who is high and who is low?
Mountain, valley, sky and sea
Are for all humanity.

What care I for robe or stole?
It is the soul, it is the soul;
What for crown or what for crest?
It is the heart within the breast;
It is the faith, it is the hope,
It is the struggle up the slope;
It is the brain and eye to see
One God and one humanity.
—Robert Loveman, in Ainslee's.

Our Boys Must Brace Up

THOSE who have attended the closing exercises of colleges and schools where co-education obtains must have observed that as a rule the girls carry off a majority of the honors.

The superior scholarship of girl students has been demonstrated strikingly this year at many of the schools of the higher grades in Georgia.

At the Georgia Military College, Milledgeville for instance, the number of boys and girls in attendance is about equal, but the girls won most of the honors for the school-year just closed, and were very largely in the majority on the honor-rolls of almost every grade.

In one of the highest grades every name on the honor-roll was that of a girl.

Similar reports come from almost every school in Georgia where boys and girls are brought into competition. Most of the co-educating colleges of the country tell the same story.

Visit the public schools of Atlanta whenever you will, and you will invariably find more girls than boys on the honor-rolls.

Why do the girls beat the boys at school so decidedly in high grades, as well as the lower ones? Why do the girls as a rule "outstand" the boys not only in Georgia, but in all other parts of the country?

Is it because they are naturally brighter or because they apply themselves more faithfully to their studies?

When we reflect that there are a great many more girls than boys at school in this country, and that the girls are evidently learning more than the boys, we must realize the probability that unless our boys "brace up" the women of the rising generation will far outclass the men in intellectual acquirements and efficiency.

And yet you meet men every day who will look you in the face and solemnly declare that women are not the intellectual equals of men.

This very assertion indicates that an increase of intelligence and information is needed among our men.—Atlanta (Ga.) Journal.

Hungry for a Hand-shake

He was sitting in a park. He looked downhearted and despondent. His clothes were dusty, but not ragged. There was a look of despair on his boyish face—almost a look of desperation. Some one noticing his despondent look sat down by him, saying, "I judge you are a stranger in the city; I want to shake hands with you."

A bright look came into the young man's face, and he eagerly held out his hand.

"Oh!" he said, "I am so hungry for a hand-shake! I left my home about a week ago with the prayers and best wishes of my friends. Times were hard, and it seemed necessary for me to go into the world to make a living for myself. I supposed there was lots of work for me in this city, but I don't think there is anything, and I am discouraged."

He bit his lip hard as he said this, and his mouth quivered.

"I will try again," he went on to say, "since some one cares enough for me to shake hands with me."

The hand-shake was the beginning of his success. Downhearted and discouraged before, feeling that there was no one who cared for him in a great city, his heart was made glad by that simple thing, a hand-shake, and he took courage and soon found employment.

There are people on every side of us perhaps not in these exact circumstances, but who are discouraged and depressed, who need a hand-shake, a friendly word, a kindly interest.—Union Gospel News.

Cardinal Newman on Conscience

Cardinal Newman, than whom there was no more brilliant thinker, says some excellent things on conscience, as follows: "Whether a man be born in pagan darkness or in some corruption of revealed religion; whether he be the slave of some superstition or is in possession of some portions of Scripture, in any case he has within his breast a certain commanding dictate—not a mere sentiment, not a mere opinion, or impression, or view of things, but a law—an authoritative voice, bidding him to do certain things and avoid others. It is more than a man's self. The man himself has not power over it, or only with extreme difficulty; he did not make it; he cannot destroy it. He may silence it in particular cases or directions; he may distort its enunciations, but he cannot—or it is quite the exception if he can—emancipate himself from it. He can disobey it, he may refuse to use it, but it remains. To those who use what they have, more is given. At the same time the more a person tries to obey his conscience the more he gets alarmed at himself for obeying it so imperfectly. His sense of duty will become more keen, and his perception of transgression more delicate, and he will understand more and more how many things he has to be forgiven. And the voice of conscience has nothing gentle, nothing of mercy, in its tone. It is severe, and even stern."

The Storms of Life

Amid all these storms we are strengthened and consoled by the assurance that they are necessary, and are appointed to work together for good. They purify the atmosphere of the soul; they dispel the mists of sin and unbelief, and let in bright sunglimpses of divine love and light; they loosen our hold of earthly things and our attachment to earthly friends and earthly spots; they arouse us from our sloth and stagnation, and keep us in the vigor and freshness of spiritual activity. Yet still we long for their cessation, and look forward with joyful hope to the region of everlasting peace. In heaven there will be no stormy winds or raging waters. Its sky will be without a cloud, for sin and all its shadows of evil will vanish forever. The last billow of earth will die away in faint, far-off music on its shores. Through the shoals and the breakers and the sunken rocks of those perilous worldly seas the Christian voyagers—some on boards and some on broken pieces of the ship—will escape all safe to land, and there will be no more sea.—Hugh MacMillan.

Good Cheer About Death

Let any man be of good cheer about his soul who has ruled his body and delighted in knowledge in this life; who has adorned the soul in her own proper jewels, which are temperance, justice, courage, nobility and truth. In these arrayed the soul is ready for the journey, even to another world, when the time comes. For if death be the journey to another place, and there all the dead are, what good can be greater than this? Be of good cheer about death, and know this of a truth—that no evil can happen to a good man, either in life or after death. God orders and holds together the whole universe, in which are all things beautiful and good. He keeps it always unimpaired, unconfused, undecaying, obeying his law swifter than thought, and in perfect order.—Socrates.

Give Away the Truth

Do not die disgraced. If you are rich in the truth of the gospel, give it away. Do not hoard it; use it. If you have felt its gracious influence upon your own life, if it has made your past more endurable, your future more hopeful, let others share in your wealth. Give it away in the words of your lips, in the acts of your hands, the expression of your face, the spirit of your life.—Universalist Leader.

Croesus

Croesus, King of Lydia, Asia Minor, came to the throne about 562 B.C. He was the richest king mentioned in history, and was also a great conqueror—at one time ruling over thirteen nations. He used to invite great men to Sardis, his capital, and entertain them in his palace. Among those who visited him were Aesop and Solon. One day Croesus showed his riches to Solon, and asked him who he thought was the happiest man in the world, expecting to hear himself named. "The man whom heaven smiles upon to the last," said Solon. This made Croesus angry, but soon afterward his fortunes began to change. His son, Atys, was killed while hunting, and the Persians under Cyrus made war upon Lydia, and took Sardis by storm (548 B.C.). Croesus was taken prisoner and condemned to be burned alive. When the pile was lighted he cried out, "Solon! Solon! Solon!" Cyrus asked what this meant, and when he heard the story he set Croesus at liberty, made him his friend, and let him keep his title of king.—Epworth Herald.

Don't Save Money and Starve the Mind

How many there are who have been very successful in saving money, but whose minds are as barren of anything beautiful as is the hot sand of the Sahara Desert! These people are always ready to invest in land, stocks or houses, but are never able to buy books or collect a library.

We know men who started out as bright, cheerful boys, with broad, generous minds, who have become so wedded to money-making, so absorbed in their business, that they cannot find time for anything else. They never travel or visit their friends. The daily paper limits the extent of their reading; recreation of any kind is relegated to a far-away future, and yet these men are surprised, when they retire from business late in life, to find that they have nothing to retire to; that they have destroyed the capacity for appreciating the things they thought they would enjoy.—Success.

Counting the Cost

In home management there is immense wisdom in counting the cost before we indulge in too many luxuries. Parents who can deny their children nothing; sybarites who can never say no to themselves; careless housewives who do not practise frugality, are apt to come to shipwreck through their remissness in not counting the cost. Far better to wear a shabby coat or a faded gown than to be hampered and handicapped by the expense of a new one which cannot readily be paid for.

Far better eat plain fare than purchase delicacies which unduly tax the pocketbook. Far better let the beloved ones sometimes wait for a pleasure than procure it at risk to the health of an overworked father and mother. Before an important step, wisdom dictates that one count the cost.—Christian Herald.

His Last Trip

A pathetic incident of an old horse of Ipswich, Mass., formerly owned by an expressman, is related by the "Boston Herald."

On account of his age and debility the old horse had been taken from work and turned out on a farm to graze. One day he made his appearance, unattended, at the railway-station, backed into position as if he had an express-wagon behind him, and waited as in the old days. Shortly after the train arrived the old horse went slowly away to the village, where he backed up to the express-office, as had been his custom for years. Then, after a reasonable time, he started up the road toward the farm, and later in the day was found dead by the roadside.

The Secret of Success

Andrew Carnegie has selected his own epitaph, which he desires shall read, "Here lies a man who knew how to get around him men much cleverer than he." Possibly that faculty is the most valuable one of which a business man could be possessed. No man can make a great success in life single-handed, and he is the wisest and generally the most successful who has the ability to surround himself with able assistants. The more perfect each part of a machine, the better the results.—Four Track News.

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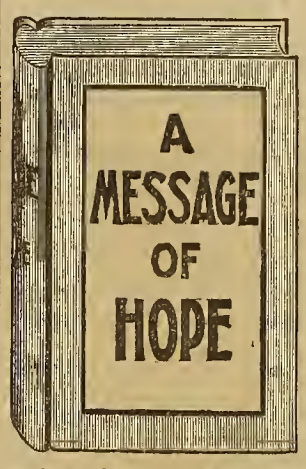

The accompanying cut is of a book written by Dr. J. M. Peebles, the great lecturer, author and physician, of Battle Creek, Mich., who has perfected a system of treatment that promises to banish disease and suffering. The Doctor claims that disease is abnormal and can be positively banished from the world. At the age of 81 he is as hale, hearty and vigorous as most men of 30, and he says that any one can command their faculties and health as he has done. The Doctor has written this book for the sole purpose of revealing to sufferers the wonderful system of treatment which he has originated, and you will find in it knowledge that will be of great value to you. It gives you the key to perfect health and happiness. Among the thousands of cases cured by this wonderful system of treatment are the paralytic, the blind and the deaf; also those suffering from Bright's disease, consumption, catarrh, stomach and bowel troubles, nervous debility, rheumatism, heart disease, female troubles, fits, neuralgia, bladder trouble, dropsy, eczema, blood disorders, piles, asthma, in fact all chronic troubles. So sure is the Doctor that his treatment will cure all chronic diseases that he has instructed the Institute of which he is president to give every reader of the FARM AND FIRESIDE who is in poor health a ten days' treatment free, postage paid, in order to demonstrate to them that health is within their grasp. Write at once, addressing Dr. Peebles' Institute of Health, Battle Creek, Mich., Drawer N 7, stating your troubles, that they may prepare a special treatment to fit your exact condition. They will also send you their book "A Message of Hope," explaining fully their grand system of treatment, and a full diagnosis of your case, with their professional advice.

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Out of the Shadow

By Frank H. Sweet

Chapter I.

Well up in one of the pine-covered peaks of the Blue Ridge is a small clearing. It is of irregular shape, and is hemmed in on the north and west by a broken line of frowning cliffs. In the south the forest creeps up, dark and silent. From its depths come the noise of a mountain stream, and the dull, softened roar of a distant waterfall. A bank of mountain-laurel skirts the remaining side, and beyond this the forest falls away in long, sinking waves until in the distance it smooths out into a sea of vague lines and curves.

On two sides the clearing is threatened with an invasion of laurel and azalea. Already stray shrubs are forcing their way under the rails of the zigzag fence and mingling their glossy leaves with the dull green of the sweet-potato vines; further on the potato-ridges lose themselves in a sea of pumpkin and squash vines. Then comes the corn-patch, the "yankee beans," the cabbages, and all the odds and ends of vegetables and "yarbs" which go to the making of a "right proper truck-patch;" and in the midst of it is a clumsily built log cabin chinked with red clay and having a broad, stick chimney at one end. Near the chimney is a lean-to shed, which answers the double purpose of corn-crib and mule-stable.

Time was when Moses Grinnel was ambitious of having a frame-house and cellar like "quality folks," but that was in the early days of his married life, when the sky was clear and all things seemed possible. Then the mortgage had seemed a small thing, which a little exertion was to remove. But the years had brought new cares and expenses, and the mortgage was allowed to remain; even the interest was sometimes found hard to meet. Money was scarce. Farm produce met a slow sale. But the forest was full of game and the streams of delicious mountain-trout, so the hunter was allowed precedence of the farmer, and gradually the clearing succumbed to the persistence of small shrubs and weeds. Each year saw the truck-patch diminish in size, and the poor broken fence disappeared rail by rail under the friendly shadows of rhododendrons and shrubs.

This did not imply shiftlessness on the part of Moses Grinnel—only the slow decay of his ambition. He was a strange, silent man, powerful in frame, but slow and gentle in movement. Somewhere in the past was a shadow, whose influence still lingered in the distrustful eyes and quick, startled glances. For days together he wandered off by himself, and always returned more gloomy and reserved than ever. But he was sure to bring with him a generous toll from the forest and mountain streams.

One afternoon a horseman was slowly making his way up the mountain path. The clouds which had been threatening all day were now driving black and furious down the valley. They rested low on the hills, so that a few hundred feet above the horseman the mountains were enveloped in a mist which stretched across overhead like a curtain—black, gloomy, tossing, folding and unfolding on the hillsides, changing in a thousand ways, but never breaking its murky thickness.

To the right a narrow stream rushed tumultuously down the steep slopes, now hurrying through deep glades and under cool, overhanging rocks, then pausing as though irresolutely on the verge of a high precipice, only to plunge a moment later into the unknown depths. A brief rest in the clear, deep pool, and then it rushed on toward the distant river.

As the horseman reached the edge of the clearing a sudden burst of splendor caused him to pause involuntarily. Over the top of the mountain the clouds had suddenly vanished. The horizon and the whole triangle formed by the sloping mountain sides and the line of the clouds was clear as crystal, and the sun poured the undimmed glow of its rays right down the valley under the dark curtain of clouds. In an instant the curtain, which had been so black and forbidding, became a mass of waving gold. From hill to hill it flamed in indescribable splendor. The mists on the mountain sides were transformed into gorgeous and fantastic shapes. Now they flew down the ravine like frightened hosts, turning and seeking shelter in every opening, under every rocky ledge, then flying on again. Now they climbed the hills, swiftly crowding over one another, and flashing in and out of the dark recesses of the forest. Then the great curtain went rolling upward and vanished in all its golden glory, as if gathered by invisible hands swiftly up into heaven, revealing as it swept away, high up in its majesty, solemn, grand and yet most holy in the radiance that now surrounded it, the rugged grandeur of the mountain peak.

Unconsciously the horseman removed his hat. As the mists once more swept forward and hid the mountain from view he looked up with simple awe.

"Hit's the glory o' God," he said, reverently.

A moment later he reined up before the small cabin. A sallow-faced woman sat in the doorway, smoking. Beside her lay a pair of crutches.

"Howdy, Mis' Grin'l," he said, as he sprang lightly from the horse and threw the bridle-reins over the pommel of the saddle; "s'pose the misery's still a clutchin' of ye?"

"Hit's sort o' fitified," replied the woman, wearily, "jest now an' ag'in. Folkses well?"

"Jest toler'ble. Whar's Linda?"

But even as he spoke came the sound of brisk rubbing from somewhere behind the cabin. At the same moment a rich, clear voice broke into a plantation melody.

The two listeners almost held their breath. Into the tired eyes of the invalid crept a soft light that for a moment overcame the customary look of pain. As the low, plaintive notes died away she looked up with a sigh.

"Linda's singin' allers do chirk me up," she said.

Her companion did not speak. But the sudden glow that came into the plain face and honest brown eyes made him for the moment positively handsome. At length he said, apologetically, "Thar was a letter fer Linda down to the settlement, an' I 'lowed I'd fetch hit up. 'Twa'n't much out o' my way. 'Sides, I reckoned you might be gettin' short o' tobakker, an' I've made free to he'p you out a little. Mose is allers mighty free with his game an' fish, an' 'tain't off'n as a man gets a chance to even up."

"Thank ye kin'ly, Bob! Thank ye kin'ly," said the old woman, as she accepted the generous package of tobacco. "Mose is p'intedly sot ag'in visitin' the settlement, an' 'tain't off'n we get fresh plug. Ye'll find Linda round back the mule-shed."

As the young man disappeared around the corner the woman's eyes followed him reflectively.

"At the sound of approaching footsteps the young girl looked up quickly."

"Bob's good-natured an' has a soft heart," she muttered half aloud, "but his paw 'lows he's triflin' an' can't make a riffle. He says he jest hangs round the engineerin' fellers, an' spends all his time an' money a pursuin' of their new-fangled min'ral studies an' a raft o' foolish stuff. If hit's that-away Linda must be keerful. 'Cep'n she is she'll be like her maw." At this moment came a sudden hissing from inside, and with a startled, "The water's a-kickin'!" the aged invalid hastily gathered up her crutches and quickly disappeared in the cabin.

In the meantime Bob had come upon a very pretty scene behind the cabin. A bright-faced girl was bending over the weekly wash and softly singing to herself. Overhead were the spreading branches of a giant oak; in the background a gorgeous bank of hollyhocks and dahlias. Clinging to a branch of the oak was a kitten, mewing piteously. It had rashly undertaken a journey it was afraid to retrace.

At the sound of approaching footsteps the young girl looked up quickly. A flush of pleasure overspread her face.

"Why, Bob!" she exclaimed, cordially, "I'm right glad to see you. We ain't had comp'ny since a week come Chuesday. Folkses well?"

"Jest toler'ble." Then, as he reached up and grasped the imperiled kitten, he added, with a grimace, "Dad's jest a-r'arin' an' chargin' same as ever. Seems like he jest nachally can't be quit of hit."

"Yes," said the girl, sympathetically. "He was here Chuesday, an' seemed plumb set on talkin' 'bout his Bob." Then she broke into a merry laugh. "Hit do seem ridiklous to hear him talk 'bout a big man like you, as is over six feet, as 'that triflin' Bob, as is no good for huntin' or crappin'.' I heerd him 'low to maw that Bob was aimin' to have a hick-'ry wrapped round him."

Chapter II.

The young man reddened under her glance.

"Dad's bark is wuss 'n his bite," he said, slowly; "but hit do aggervate me occasional. He 'lows as a man as don't crap nor hunt ain't no good nohow. He won't b'leeve thar can be anything better nor crappin'. Mebbe arter awhile I can do somethin' as will change his mind."

"I know you will, Bob," and she laid her hand confidently on his arm. "Some day folks are goin' to be proud o' your friendship. Jest you keep on quiet like an' hit's sure to come."

"An' do you keer?" a sudden light flashing into his face.

"In course. Ain't we allers lived on the same mountain, an' didn't you tote me through snow-drifts when we used to 'tend school? Outside the fam'ly you are my best friend, Bob."

"An' sometime—" he began, but she stopped him with an imperious gesture.

"I wisht you wouldn't talk that-away," and there was a shade of reproach in her eyes; "we are jest good friends, an' hit'll be too bad to spile hit with such talk. I don't keer for nobody that way, an' never 'spec' to." Then after a moment's silence she added, in a low voice, "If only I'd been a man."

"Why?"

"Why, so I could go off an' learn things. So I needn't be ignorant an' no 'count. Hit's bad 'nough to be a woman, but hit's a heep sight wuss to be a mountain woman as has no chance at schools an' no way o' gittin' to 'em." Her voice was low in its intensity, and in her eyes was a wistful, almost pitiful expression. "Hit's gran' to be up here on the mountain, in course," she went on after a moment's pause, as her eyes swept down the valley to where the Pinnacles and Hawk's Bill were just visible through a bank of leaden mist, "but hit's awful to know o' the world o' knowledge jest outside, an' we a hungerin' here an' can't get to hit. Aunt Linda, as was here last winter, 'lowed to get me a place in a music-school—or conservator, as she called hit—but seems like she wa'n't able. She said as some girls was 'lowed to work for schoolin', an' that I could live with her. She said I had a gift for music." Then she added, bitterly, "But hit's wastin' time to hone fer schoolin' when I can't even git books to learn from. I 'low I'd better stop lookin' fer a letter from Aunt Linda, an' go to piecin' a 'Job's Trouble' bedquilt like the rest o' the mountain girls."

At the mention of letter the young man flushed guiltily.

"Why, that's jest what I come fer," he said, as he produced a letter from his pocket, carefully wrapped in many folds of newspaper. "I 'clare I'd clean fergot hit. An' hit was registered, too, an' I had to sign my name. Old Wicks 'lowed hit was in the office nigh on four weeks."

But the girl scarcely heard him. With trembling fingers and bright eyes she was opening the envelope he had given her. As she took out the letter a small slip of paper fluttered to the ground which he recognized as a check. He picked it up and waited for her to finish reading. This was a slow accomplishment, but at last she had spelled her way through. Then she raised her eyes. But what a change. All the bitterness and discontent had gone out of her face. Even the lips had lost their penciled lines and were parted in a half smile.

"Hit's all come," she said, in an awed voice; "everything I wisht for—an' better. Hit was wicked in me to misdoubt the good Lord. He's sent me more 'n I ever ast fer. Aunt Linda writes her husband is doin' well, an' she can do more fer me than she 'lowed at first. I needn't work—only jest study an' learn. She says they've bought a new house an' a gran' pianer, and that I can have all the books an'—music—an' everything—I wish—fer."

Her voice had become broken, and suddenly she threw her apron over her face and rushed into the shed. The young man waited a few moments, then walked back to his horse and rode away into the forest. It was the first time he had ever seen her cry.

Soon after he disappeared she returned to the washing. When that was finished she went to the edge of the forest to gather firewood. As she was returning to the cabin with her arms full of dry limbs she was suddenly conscious of a hurried footstep behind her. Turning suddenly she saw a small black boy who lived in the neighborhood.

"Oh, Missy Linda—Missy Linda!" he gasped, his eyes showing white in their terror, "Mist Grin'l done mash 'isse'f—done kill 'isse'f dade, an' sont me fer he'p to git him cl'ar!"

"Stop!" she exclaimed, sharply; "now think an' tell me slow. Speak soft, so't maw can't hear."

"Hit's jest lak I done tole yo'," the negro boy persisted, earnestly. "Mist Grin'l foun' a honey-tree, an' was a choppin' hit, when it bruk squar' an' cotched him. He's plumb smash dade."

"We'll go an' see. Wait till I git some things." And leaving him standing near the edge of the clearing she sped toward the cabin. When she returned she had a small bundle and a bottle.

"Now run!" she said, and with the black boy in advance she hurried into the forest. For half an hour they went on at a rapid pace, then the boy suddenly paused.

"Dar," he said, and pointed to where a large tree had fallen across the path.

Linda sprang forward with a sharp cry. Almost at her very feet a man lay pinned to the earth, his face pressed in the grass and his hands convulsively clinging to the bushes on either side.

"Oh, paw," she cried, as she flung herself on the ground beside him, "are you much hurt?"

"I—can't—stir," came in stifled tones from the grass. "An'—an'—I'm smotherin'. If—you—can cl'ar—away—the stuff—from my face—so't I kin breathe."

With fierce energy she tore away great handfuls of roots and grass from beneath his face, and soon had a small excavation. He drew a long breath.

"Hit smells good," he said. "I don't mind the pain so much now that I kin breathe. Hit was terrible."

"But what'll I do next, paw?" she asked, looking with horror at the great mass of wood lying across him.

He tried to raise his face, but the movement caused such agony that he fell back with a groan.

"I 'low you can't do nothin' 'cept go fer men to cut the tree. Then they can move hit off me."

"But—but hit's four miles to whar the Biggses live, an' they're the nearest," she said, slowly. "Hit would be long past dark 'fore we could git back."

"Hit can't be he'ped. I reckon I ain't much hurt 'cept the legs. The tree must 'a' ketched. If it hadn't I'd 'a' been smasht plumb flat."

At this moment the sound of distant thunder was heard. A new look of terror came to the girl's face.

"I can't go, paw," she said, decidedly. "If the rain should come 'fore I got back the water'd run into the holler an'—an' you'd be drowned. I'll cut the tree myse'f."

There was a moment's silence, then he said, slowly, "I reckon you're right, Linda, an' I'd hate to drown 'fore you got back—an' arter, as well. But I misdoubt ye cuttin' the tree. Hit's tough, an' would be a plumb stiff job fer a man. However, ye c'n try."

The ax lay on the ground where it had fallen when the tree struck him. Grasping it, Linda threw off her bonnet and went vigorously to work. She was strong and muscular, and had almost the endurance of a man. Clear and sharp the strokes rang through the forest, every stroke telling in spite of her inexperience. Gradually a deep seam appeared in the surface of the massive trunk. Every moment it deepened and widened, and at last, when she paused to take breath, it had reached nearly to the center. Dropping the ax for a moment she went to her father. He was unconscious. Telling the black boy to bring some water from the brook and bathe his head, she hurried back to her work. In the position her father was lying it was impossible to apply ordinary restoratives.

Not a second did she pause in the work now. Back and forth flew the ax, sending great chips into the forest. Perspiration streamed down her face and trickled to the ground. Her breath came in short, labored gasps, and on her white face a look of growing terror and despair. A dark stain of blood was slowly spreading over the under lip where the clenched teeth had penetrated.

Chapter III.

But at last the tree was divided. Then she quickly cut and trimmed a strong sapling to be used as a lever. A convenient stump made a good fulcrum. Placing the lever in position, she threw her whole weight upon it. But the tree did not stir. Again and again she tried, and at last had the satisfaction of seeing it move a few inches. Then she cut some blocks to be used as wedges, and placed the boy near the tree. As she raised it a few inches he slipped one of the blocks under. She raised it a few inches higher, and more blocks were placed under. At length she went to her father and found that she could draw him from beneath the tree. Turning him over, she forced a few drops of whisky between his lips. Then she sent the boy to the cabin for the mule and a small drag that was used to move stones. While he was gone she washed and dressed the wounds as well as she knew how. As her father had surmised, he did not seem to be much injured except in the legs. One of these was badly crushed.

When the boy returned she made a rough bed of leaves on the drag, and with much difficulty placed her father on it. Then she sat down upon it herself and took his head in her lap.

"If only we had a cart," she thought, as she directed the boy to lead the mule as slowly and cautiously as possible. She was almost glad that her father had not regained consciousness. He would be spared some of the agony of the journey.

Overhead the sky had grown inky black. The boy and mule had to almost feel their way through the woods. Occasionally vivid flashes of lightning helped them to keep their course. Before they had covered half the distance to the cabin the rain was coming down in torrents. It was terrible, and for the first time in her life Linda was thoroughly frightened. Would they ever reach home? If only her father could have been spared it. If only she could be sure his deathly faintness was but temporary. At last they saw a light in the distance, and guided by it were enabled to move more rapidly. When they reached the cabin they found Mrs. Grinnell standing in the doorway with a lantern.

As soon as her father had been placed on the bed Linda once more went out into the darkness. Her mother went with her to the door.

"Hit's an awful night, Linda," she said, tremulously, "an' hit's a long, long way to the doctor's. Ye'll shorely be lost."

"I don't keer fer the night, maw, if—if only paw'll come out all right. I can find my way, an' I'll take the mule."

But it was a night she never forgot. Through miles of dark forest, where she had to bend low over the saddle to keep from being swept off by the limbs, down black ravines, and along the banks of rushing streams, where a single misstep would have sent her into the whirling water below. Often she had to wait for a flash of lightning to assist her in passing a dangerous point. Frequently she had to turn back in search of the way she had lost. But at length the clouds began to break away and the moon appeared. Soon after the village came in sight. It was after daybreak when she returned to the cabin.

"Doctor'll soon be here," she said in answer to her mother's look of inquiry. "How's paw?"

"He's kem to, but seems sort o' wanderin' in his mind."

An hour later the doctor came; a grave, elderly man, decisive in action, but chary of speech.

The wounds were examined and dressed, and then he sat down by the bedside. For a long time he remained there, watching the patient's face and listening to his wandering talk. Then he arose to leave.

"The wounds are not dangerous," he said to Mrs. Grinnell, who followed him to the door anxiously. "No bones broken. A few weeks and he will be able to walk."

But as he went out he made a slight motion for Linda to follow him. When they reached the hitching-bar where his horse was fastened he said, abruptly, "You seem strong and capable. When your father gets better you must be with him as much as possible. Keep him cheerful and interested in something. Never let him wander off by himself. Watch him as you would a child."

"But—but you told maw he was not dangerous," she said, wonderingly.

"Nor is he—physically. But his mind is in a bad way. It must have been affected for years. You can do more for him now than all the doctors in the country. If he wants to go fishing, you must want to go fishing, too. When he prefers hunting, you must prefer hunting. It may be a little irksome at first, but I fancy you will learn to like it," and he looked at her keenly.

"I like the woods better'n I do housework," she said, hesitatingly.

"I thought so. Well, it is a pleasant life. If my patients could spare me I wouldn't mind bringing up my gun and rod for a few weeks. The scenery is magnificent."

She watched him as he rode out of sight, and then returned to the cabin. After the morning's work was done and her father made as comfortable as possible she once more went out. It was scarcely yet noon, but already the sun was nearing the top of the lofty mountain. Another hour and it would begin to creep over, and then a long shadow would slowly descend to the little clearing. There it would remain until the sun once more began its upward course. Sometimes Linda thought they lived too much in the shadow, but that was only during her moments of depression; and even then she had to walk but a little way up the mountain to feel rested. If she could only have the books as well! The books and the scenery together, she thought, would make her perfectly contented.

As she stood there she suddenly remembered the letter. The events of the night and morning had crowded it from her mind. Now it returned in its full significance. A quick wave of exultation swept over her. She could go out into the world, as she had dreamed, and battle for her equality. But even with the thought came another—her conversation with the doctor. A look of terror crept into her eyes. She could not do it—could not, would not. Her father was all right except his mind; and this had troubled him for years. It would be time enough to attend to it when she returned. And the next few years meant so much to her—life, hope, everything. Would it be right to give it all up?

Unconsciously she was clasping and unclasping her fingers. All the exultation had gone out of her eyes, all the buoyancy out of her step.

"I reckon I'll go up the mountain," she said at last, wearily.

Far up on the mountain side was a broad ledge that overlooked ranges and peaks and hills innumerable. This was where she came when sorely tried. Here she sought advice and strength.

It was a long climb, and when she reached the ledge the color had returned to her face, but the trouble had not left.

Far above the peak still towered, as grand and gloomy as ever; but the valley had settled down among the shadows, and the clearing was but a little bare spot on the mountain side.

Between the lower ranges were beautiful, quiet valleys dotted with farms and traversed by winding roads and sparkling streams. To the east and southeast the foot-hills faded away into the plains of the Atlantic slope. Almost at her very feet was a dizzy precipice. Below a narrow gorge zigzagged its way down the mountain side.

The sun had long since moved behind the line of the mountain, but far down the valley she could trace the shadow as it crept away to the east. As she watched the grand line of its march, over hill and valley, past the dots and lines that represented farms and rivers, her own affairs grew small and commonplace.

At length she arose and walked to the edge of the precipice. Taking the letter and check from her pocket she rolled them into a small, hard ball and dropped it over. Then she walked down the path, and her step was firm and elastic, and the last vestige of shadow had disappeared from her clear eyes.

[TO BE CONTINUED]

Where the Farmer Boy is Wanted

Between the ages of ten and twenty years is the period when the boy can in a large measure be molded into what we would have him to be. Before that age he will show the natural bent of his mind, and this in part may serve as our guide; but between the ages of ten and twenty he must be guided into the path we would have him follow in after-years.

By the way of illustration I can compare the young boy to nothing better than a grape-vine. If the vine is neglected it grows into a wild, misshapen tangle. If it be carefully trained it becomes a thing of usefulness and beauty. If the boy is allowed to grow up wild, following the bent of an untrained mind, what do we have when he reaches manhood? We have merely an able-bodied, untrained, common laborer. Where is he wanted? He is wanted wherever muscle instead of brain is wanted; where the cheapest class of labor is called for; where he will be content to labor like the ox, guided by a master whose mind has been trained as he grew to manhood.

There are thousands of such men, and you will find that as ninety-nine per cent of them grew to manhood they grew like the untrained vine. There always will be plenty of such men to supply the demand for common laborers; they will come from the ranks of the struggling lower million, who are chained to unending toil. But our farmer boy ought not be found among them.

Such men as the well-trained farmer boy makes are wanted in all the walks of life. They are wanted first of all on the farm. They are wanted there to build up the soil, to till it better, to increase its productiveness, to grow larger crops of better quality, to raise the standard of the farmer, to increase his independence and self-respect, to broaden his mind, make him honored by all men as the real wealth-producer of the world, to improve the farm home and its surroundings and make it the center of the highest intelligence and the broadest culture, the abode of contentment and the best-loved spot on earth.

"From homes like these our country's grandeur springs,
That makes her loved at home, revered abroad."

The farmer boy is wanted where patience, endurance and the widest knowledge of Nature and of Nature's ways are needed; where character, honesty and integrity are demanded, and wherever men are obliged to rely upon men they can trust. They are wanted in politics to purge them of the low villainy and chicanery that has been injected into them by men without principle or honor. They are wanted at the primaries to choose for our officials men of integrity and trustworthiness; at our elections to cast their ballots for clean, upright men who will discharge their duties honestly and faithfully. They are wanted in our legislative halls to simplify our laws and to give them force and to check the rapacity of corporations organized solely to rob the people; they are wanted in our courts of law to mete out quick and impartial justice to lawbreakers, be they rich or poor; to protect every man in his just rights and in his honestly acquired property.

Many of our farmers' boys have proven their fitness for these things—to supply these wants—now let us do all that is possible to fit all of them to stand at least one step higher than the plane we occupy. Above all things let us train them for the noblest occupation of man. Lead them while they are young to love the farm and all that pertains to it. I am aware that our efforts in this direction are rendered more difficult by our present system of education. Heretofore we have allowed professional pedagogues to prescribe the educational training of our boys, and they have industriously educated them from the farm instead of to it. In the text-books in use lawyers, merchants, doctors, soldiers and professors of various kinds are constantly paraded before our boys as the men to pattern after—the men most worthy of consideration. On all possible occasions these men are referred to as "leading citizens," "men of influence," and so on, while the farmer is rarely mentioned except in caricature or to illustrate simple-mindedness. In the district schools the farm boy is put through courses of study embracing almost everything but agriculture. In most of our leading colleges the same system prevails.

Professional men and artisans of all kinds are educated and trained for their vocations—without such education and training they could not successfully pursue them—but the idea prevails that anybody can farm, and the farmer boy has been compelled to pick up as best he could all the knowledge of agriculture that he possesses. He is taught nothing about soils, nothing about fertilizers and their constituents. Nitrogen, potash and phosphoric acid and their uses and effects are Greek to him. He has only a vague idea of how plants grow and why they grow—in fact, he stands before his own vocation, the most intricate of all vocations, almost totally ignorant of even its first principles. Is it any wonder that the farmer boy, keen-witted as he usually is, regards agriculture as the most dull, uninteresting, wearisome calling one can engage in?

The farmer boy is wanted on the farm, but to keep him there we must make farming attractive by educating him for it. There are thousands of intricate problems in agriculture yet to be solved, and trained minds and patient application are needed for their solution, and our best and brightest boys are wanted for this work.

The boys are wanted on the farm. Let us keep them there by broadening our own views of life, by securing all the conveniences enjoyed by the people of town and city—such as free delivery of mail, daily papers, and the telephone—that we may keep in close touch with our neighbors and the great busy world.

Let us interest the boys in the farm by giving them the use of a piece of good land to grow crops on for themselves. Let us encourage them to work out the problems in agriculture while they are young, that they may be fitted to manage a farm skilfully and profitably when they reach manhood. Thousands of bright boys leave the farm to become clerks and salesmen at meager salaries because on the farm they see no opening for themselves—no prospect in the near future of being able to establish a home for themselves.

Give the boy a chance to earn something for himself on the farm and to see his way clear when he begins to think of a home of his own. Then he will stay where he is most wanted.

Let us now demand that at least the first principles of agriculture shall be taught in our district schools, that our boys who are wanted on the farm shall be educated to it instead of away from it.—Fred Grundy, before the Farmers' Institute of Christian and Bond Counties, Illinois.

Farming Out Convicts

The idea of a sovereign state leasing out men convicted of offenses against its laws to a private individual to be used by him for money-making purposes is certainly repugnant to American sentiment.

Benjamin F. Blackburn, who was already thoroughly familiar with the subject, recently made an extended tour through Georgia to ascertain the present condition of this system in that state and the results so far attained. In an article called "Farming Out Convicts," in the April number of "Frank Leslie's Popular Monthly," he has set forth the results of his investigation; and in speaking of the state farm he says, "Both in sanitary environment and regulation and moral custodianship the farm is a splendid improvement on the old system, or any system in the world for that matter. The inmates have an abundance of air, room and medical care, whereas their food is more varied than in the camps of the able-bodied. In addition, the work required of them is no more severe than that which they followed prior to imprisonment.

"The farm is not operated under lease contract, but directly by the state, for the reason that it had been demonstrated that the lessee did not always show the care in nursing the diseased and disabled that conditions demanded, and could not be expected to look after their medical care with the same consideration as would the state. The lessee was not a promoter of sanitariums. He paid his money for the labor of the individual a head, and naturally enough wanted its value in toil. The hospital rat had no welcome in his camp. Under the existing law the camp physician is expected to guard against possible wrong by deporting the afflicted to state farms as soon as it shall appear that infirmities have set in.

"There are under the management of the state farm at present one hundred and fifty-seven aged and infirm men, eighty-five women, and nineteen boys and girls under fifteen years of age. Among this number there are only four white women."

—It ain't no use to grumble and complain;
It's jest as cheap and easy to rejoice;
When God sorts out the weather and sends rain,
Why, rain's my choice.

—James Whitcomb Riley.

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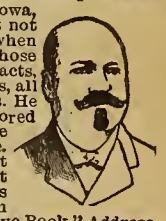

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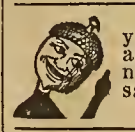

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The Vaccinator

When the doctor comes so softly
With his little kit of tools—
Heaps and heaps of fluffy cotton,
Yards of bandages on spools,
Such a lot of funny scrapers,
Little tiny points of white,
Strips of huff adhesive plaster
Which stick on so very tight,
Bottles labeled "antiseptic,"
Bottles labeled not at all,
And another bottle labeled
Ordinary "alcohol"—
When the doctor very slyly,
With no purpose to deceive,
Says to you in tones persuasive,
"Won't you please roll up your sleeve?"

Then you know at once that you are up against the vaccination craze.—Vaccination.

Teaching the Calf to Drink

THE time of year recalls the dear, dead days beyond recall when the farmer's boy taught the calf to drink from a pail. The "Britt (Iowa) Tribune" refers feelingly to these strenuous moments in the life of our agricultural youth—moments that teach patience and kindly dealing with the dumb animals, for the weaned calf is full of the infinite and eternal energy. It desires its sustenance mightily, but it desires it in the way Nature has taught it to obtain sustenance. The sight of the pail seems to fill the calf's mind with forebodings. The calf desires to look up when it drinks. The farmer's son desires it to look downward into the pail. The farmer's child must hold the pail between his feet with his hands, using two other hands to hold firmly the cow's child to its milk. When the calf humps its back and tries to jump, it is necessary to hold it down with two more hands. When it breathes hard into the pail and blows the milk all out, you must twist its tail with two more hands. Just before a calf hunts it wiggles its tail. At the premonitory wiggle the tail must be held also, meantime keeping the calf's head directed into the pail. The "Britt Tribune" says:

"Don't get excited; stand perfectly still, inspiring the calf to confidence by your coolness and sang-froid. There is nothing equal to sang-froid in the initial lesson, and without this attribute the pedagogue is sadly hampered. There are other requisites, one of the chief ones being that the teacher must know more to begin with than the calf. By following these directions closely a calf can be induced to fill itself with invigorating, life-prolonging milk in a very few lessons, so that it will run its nose clear to the bottom of the pail the first bunt."

When you feed a calf it is better to be alone. Especially is it necessary not to allow the women of the homestead to be present. The proceeding sometimes looks like cruelty, and they have other methods of calf-feeding that seem more feasible to them, and they do not hesitate to voice them at critical moments, thus shaking your confidence in yourself and incidentally shaking the calf's already small stock of confidence in you. It is an art—that of calf-feeding—that has not been sufficiently treated in the bulletins of the Agricultural Department.—Minneapolis Journal.

The Wrong Connection

The telephone-girl and the bill-clerk, to whom she had promised her heart and hand, were sitting in front of the fireplace talking about the happy days to come when they would be one.

From one little detail to another the talk finally drifted to the subject of lighting the fires in the morning. On this point the young man was decided. He stated it as his emphatic opinion that it was a wife's place to get up and start the fires and let her poor, hard-working husband rest.

After this declaration there was silence for the space of about three fourths of a second. Then the telephone-girl thrust out the finger encircled by her engagement-ring and murmured, sweetly but firmly, "Ring off, please. You have got connected with the wrong number."—Salt Lake Herald.

Boston Described

Bishop Potter is accused of having given currency to the following anecdote:

A Chicagoan had been taken around Boston all day to observe her bulwarks, but had failed to exhibit any of those symptoms of paralysis which are acceptable to the Bostonian mind.

"Now confess," said the Bostonian host, after the burden and heat of the day, "isn't Boston a unique town?"

"Unique?" mused the Westerner. "I believe that word is derived from two Latin words, unus, one, and equus, horse. I think Boston is a unique town."—New York Times.

Careless

"I made a great mistake when I started out in life," said Meandering Mike.

"In what way?" asked Plodding Pete.

"In not pickin' out what kind of a criminal I was goin' to be. I didn't know in dem early days when me character was jes' hein' formed dat it were goin' to be considered a crime to die rich."—Washington Star.

Solved the Tramp-problem

"I think I have solved the tramp-problem in a perfectly satisfactory way," said the New Jersey farmer as the subject was under discussion. "It did no good whatever to put up signs warning them off or to keep a bulldog at the gate. I tried all that, and last spring I made a change. I put up signs for three miles around, reading 'Tramps Please Call at the Baker Farm,' and 'All Tramps Welcomed at Baker's,' and the result is that not over three of them have called. The other day, to show you how it works, a tramp came along and looked things over and said to me, 'Any constables hidden in the barn?'

"'Not a one,' I replied.

"'How many bulldogs have you got?'

"'None at all.'

"'Got a lot of spring-guns or bear-traps set about the place?'

"'Nothing of the kind.'

"'Has a feller got to do a day's work to get a meal?'

"'No work at all. You come right in, and I will give you a square meal for nothing, and if you want to stay all night I'll give you the best bed in the house.'

"He looked at me in a puzzled way for about a minute," continued the farmer, "and then indulged in a wink and said, 'You can't play that little game on me, old man. This is my sixteenth year on the road.'

"'But what game?' I asked.

"'Putting poison in the milk and selling our cadavers to a medical college for five dollars apiece. Oh, no, Mr. Baker—not this eve!'"—Baltimore Herald.

Knew His Business

Professor Munsterberg of Harvard, whose specialty is psychology, relies to some extent on the point of a good story in enforcing his positions in abstract demonstration. He has one on the association of ideas that will illustrate. A medieval magician—more accurately called "fakir" nowadays—announced that he had invented, and had for sale, a magic pot. If certain rather common stones were mixed and placed in the pot with a certain portion of water, and the whole shaken diligently for an hour, the stones would turn to gold—provided that during the hour the operator should not think of a hippopotamus. The fakir sold a great many for fabulous sums, and not one of the purchasers ever demanded a return of the money. The fakir knew his business. He was in advance of his age in psychology, in his skill in permanently fixing in his customers' minds the association of that old pot and a hippopotamus.—Boston Herald.

No Foot-washing for Him

A pastor in the Montreal Conference was conducting a fellowship-meeting at which a man in giving his testimony told of having recently attended some Mennonite services, where the ceremony of feet-washing had been performed. He went on to say that he had been greatly impressed with it, and expressed the hope that a similar service might be introduced into the Methodist church. There was by no means unanimity of opinion on the question, for an old gentleman sprang to his feet, excitedly exclaiming, "I don't believe in it at all! There's no need for this feet-washing!" Then he added as a clincher, "Why, brethren, there are thousands of people in heaven who never washed their feet."—Epworth Herald.

A Cipher Code

A commercial traveler well known in the cycle trade on both sides of the Atlantic adds this to the collection of jokes on newly made happy fathers. The hero is the manufacturer of the wheel which the narrator sells. Being compelled to go away on a business trip about the time an interesting domestic event was expected, he left orders for the nurse to wire him results according to the following formula:

If a boy, "Gentleman's safety arrived."

If a girl, "Lady's safety arrived."

The father's state of mind may be imagined when a few days later he received a telegram containing the one word, "Tandem."—The Denver News.

High Flowers

Solly—"The highest point at which flowers have been found was in Thibet, at nineteen thousand two hundred feet."

Cholly—"How high were they there? I've paid as high as three dollars a dozen for roses right here in New York!"—Yonkers Statesman.

The Cause

Physician—"This is the worst case of indigestion I ever saw."

Patient—"Impossible, doctor! I haven't eaten anything but health-foods for the last six months."—Life.

Readjusted the Bill

"Waiter, I find I have just enough money to pay for the dinner, but I have nothing in the way of a tip for yourself."

"Let me add up the bill again, sir."—Moonshine.

Home-made Soap is as easy to be had as home-made bread, and no house is managed with the greatest economy without it.

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Corn-Raising Contest

$100.00 Cash and 104 Other Prizes

GOLDEN HARVEST YELLOW DENT CORN

Pronounced the best dent corn in the world. Our supply is obtained by special arrangement with the originator. Ears large and handsome, with good, deep grain of deep orange-color, and small red cob. Stalk medium size (not large), few suckers, slender and leafy. Makes the best of fodder. Two good ears to each stalk. Husks and shells easily. Ripens in 90 to 100 days, and makes a crop even in dry seasons, because so early maturing and strong in growth. Has yielded **one hundred and thirty-six bushels of shelled corn to the acre.** Suits greater variety of soils than any other corn we know of. The yield from the seed we send you will plant a field next year. Or you can sell at big price for seed-corn. *A money-maker*, and you will miss a splendid opportunity if you fail to get a pound, aside from the $100 and other prizes.

LIST OF PRIZES

We will give the following prizes for raising the greatest weight of corn, second greatest, third greatest, etc., from one pound of Golden Harvest Yellow Dent Corn described above:

1st Prize—$100.00 Cash.
2d Prize—Fine Piano-Box Buggy; value $60.00.
3d Prize—Latest Improved Spring-Tooth Harrow; value $20.00.
4th Prize—Set Solid Leather Buggy-Harness; value $15.00.
5th Prize—Latest-Make Breaking-Plow; value $10.00.
50 Prizes—Handsome Engraved Watch to each; value $2.00.
50 Prizes—Solid Steel Wagon-Jack to each; value $1.25.

Bean-Raising Contest

$100.00 Cash and 104 Other Prizes

NEW PERFECTION STRINGLESS BEAN

This new bean is a cross between a strain of Extra Early Round Pod and an absolutely stringless wax variety, giving much larger and handsomer pod and without any string. It is also more prolific and ready for market a week earlier. Compared with other beans the pods are one third larger, averaging five to six inches long, and absolutely stringless. Bean unusually crisp, round, full and fleshy. Being extremely productive and easily grown. A very small patch will keep a family supplied the whole season. Grows without stakes or poles, being a true bush-bean. Seed is warranted pure, coming direct from the originator, who is one of the leading vegetable-growers in America. It is the perfection of stringless green-pod beans.

LIST OF PRIZES

We will give the following prizes for raising the greatest number of pods, second greatest, third greatest, etc., from one half pound of New Perfection Stringless Bean described above:

1st Prize—$100.00 Cash.
2d Prize—Set Elegant Parlor Furniture; value $50.00.
3d Prize—Latest-Make Double Cultivator; value $20.00.
4th Prize—Library of 50 Cloth-Bound Books; value $20.00.
5th Prize—Library of 25 Cloth-Bound Books; value $10.00.
50 Prizes—Handsome Dial-Scale to each; value $1.25.
50 Prizes—Set of Six Finest Silver-Plated Teaspoons, Engraved Initials, to each; value $1.00 each set.

Rose-Growing Contest

$100.00 Cash and 104 Other Prizes

LIST OF PRIZES

We will give the following prizes for growing the greatest number of roses, second greatest, third greatest, etc., on three rose-bushes, the kinds described above:

1st Prize—$100.00 Cash.
2d Prize—Set Handsome Dining-Room Furniture; value $50.00.
3d Prize—Ball-Bearing Sewing-Machine; value $30.00.
4th Prize—Complete Decorated China Dinner-Set; value $12.00.
5th Prize—Splendid Kitchen-Cabinet; value $7.50.
50 Prizes—Beautiful Cut-Glass, Sterling-Silver Top Salt and Pepper Set to each one; value $1.25 the set.
50 Prizes—Silver-Plated Butter-Knife and Silver-Plated Sugar-Shell, the set of two to each; value $1.00 the set.

Three Prolific Queenly New Roses

Competitors in our rose-growing contest will be furnished three of the most beautiful and ready-growing roses in the world. The plants are extra large and uniform in size, and every one is now soon to bloom. Following is description of each variety:

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A new, magnificent, ever-blooming rose. Flowers large and very double, with petals of unusually heavy texture, making it extra valuable in open ground. Has the vigor of an oak, with large, heavy foliage. Hardy and of extraordinary merit.

MLLE. FRANCESKA KRUGER

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CLOTILDE SOUPERT

A strong, vigorous grower. Large, beautiful, double flowers borne in sprays, blending in color from a soft shell-pink to a pure satiny white. An extremely profuse bloomer.

HOW TO ENTER FOR MORE THAN ONE PRIZE

To enter any of the above contests the seeds or rose-bushes must be procured as above. No other kinds of corn, beans or roses can compete. You can enter one, two or all three of the contests. **FOR $1.00** (two contests) we will send you both corn and beans, or corn and rose-bushes, or beans and rose-bushes; we will also enter your name for TWO years' subscription to the Farm and Fireside, or send the paper to you one year and to any one else one year. **FOR $1.50** (three contests) we will send you the corn and the beans and the rose-bushes, and THREE yearly subscriptions to the Farm and Fireside for yourself or for your friends. Contests close at the end of the harvest season of this year. Arrangements made insure correctness, so that all prizes will go to those entitled to them.

(NOTE that when a subscriber accepts any of the above offers the name cannot count in a club toward a premium and no cash commission can be allowed)

How to Order

SEND US 50 CENTS (part of this is for the Farm and Fireside, and the remainder is for sending seed or rose-bushes). We will then enter your name for one year's subscription to the Farm and Fireside, either new or renewal subscription, and will immediately send you, **securely packed, fully prepaid and free of all charges,**

ONE POUND GOLDEN HARVEST YELLOW DENT CORN, or ONE HALF POUND NEW PERFECTION STRINGLESS BEANS, or THREE EXTRA-LARGE ROSE-BUSHES

We will also enter your name for the Corn Prize Contest, or the Bean Prize Contest, or the Rose Prize Contest. Rules for weighing or counting yield, making report, etc., sent with seed. Be sure to state which contest you wish to enter.

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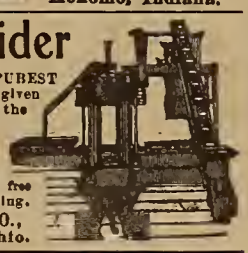

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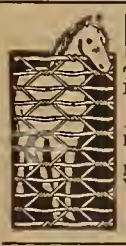

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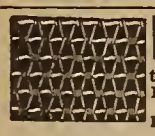

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A contest for raising corn and beans and growing roses. See Page 19 of this issue of the Farm and Fireside for full particulars.

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FARM SELECTIONS

The Toad

Toads in the early part of last summer, owing to the excessively dry weather, were quite scarce, and my cucumber and squash vines seemed to suffer more than ordinarily from bug and beetle attacks. The Massachusetts station has recently examined the stomachs of a large number of toads, and found on an average that eighty per cent of the toads' food consists of harmful insects, while eleven per cent was of such beneficial insects as bees, spiders, ladybugs, etc. The quantity of food that a toad's stomach can accommodate is remarkable.

In twenty-four hours the toad is said to consume enough food to fill its stomach four times. In one stomach, for instance, the station found seventy-seven myriapods; in another fifty-five army-worms, etc. Feeding at this rate a single toad will devour over ten thousand insects in three months. "If one reads in old books, and listens to the fairy-tales and other stories common everywhere, he will hear wonderful things of the toad; but most of them are wholly untrue. Probably every boy and girl living in the country has heard that if one takes a toad in his hand or if a toad touches him anywhere he will get warts. This is not so at all, as has been proved over and over again. If a toad is handled gently and petted a little it soon learns not to be afraid and seems to enjoy kindness and attention. He is merely one of the most harmless creatures in the world, and has never been known to harm a man or child. Every boy and girl should learn to protect this humble servant of the farmer." I have to add that my children frequently pick up toads and handle them around, and that I have never seen any harm resulting therefrom to the little fellows. But, on the other hand, the children are always admonished to handle the useful creatures gently, and not to harm them. My preference, however, is for the children to let the toads entirely alone. I don't find toads handsome by any means, even considering that "handsome is who handsome does." T. Greiner.

Hay and Corn Fodder

Reports from the Western states now seem to indicate a larger acreage of corn planted this year, and possibly more of the meadows broken up and put in the corn crop, but as these will probably be those which yield the least hay, the increased use of the corn-shredder may make hay more abundant in our market another winter if the season is at all favorable. When all the corn-growing sections save and shred their fodder, or put it into silos, they can either keep more stock or sell more hay. As the market is now the former would seem most profitable if stockers and feeders do not cost too much.—The American Cultivator.

RECENT PUBLICATIONS

CATALOGUES RECEIVED

American Steam Pump Co., Battle Creek, Mich. Illustrated catalogue of steam-pumps.

The New I. D. Seat Co., Roberstown, Pa. Circular of the "New I. D. Seat" for three in a buggy.

F. W. Calvin, Washingtonville, Ohio. Price-list of White Wyandottes and R.C. Rhode Island Reds.

Cotta Nursery & Orchard Co., Freeport, Ill. Price-list of fruit and ornamental trees, shrubs, roses, etc.

The Fuller Mfg. Co., Danvers, Mass Illustrated catalogue of wheel-hoes, scuffle-hoes and hand-weeders.

International Stock Food Co., Minneapolis, Minn. Illustrated pamphlet on the world-famous stallion, Directum—2:05¼.

F. R. Pierson Co., Tarrytown-on-Hudson, N. Y. Handsome illustrated catalogue of choice selections in seeds, bulbs and plants.

The Troy Wagon Works Co., Troy, N. Y. Catalogue of the Troy farm, freight and log wagons, illustrated by photo-engravings.

A. W. Gray's Sons, Middletown Springs, Vt. Illustrated catalogue of horse-power machines for grain-threshing and wood-sawing.

Ellwanger & Barry, Rochester, N. Y. Beautiful illustration, in colors, of the new hardy, yellow rose, "Golden Sun," and catalogue of other novelties.

Deering Harvester Company, Chicago, Ill. Illustrated catalogue of the Deering Ideal corn-binder, the Deering husker and shredder, and the Deering corn-shocker—a new machine for cutting and shocking corn.

Moseley & Stoddard Mfg. Co., Rutland, Vt. "Silos; Their Advantages and Construction," a pamphlet illustrating and describing the round stave "Green Mountain" silo. Illustrated catalogue of cheese and butter making appliances.

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to let the customer see and try them. Think of it, try the buggy 30 days, compare it with your neighbor's, and if you are not more than satisfied at the end of the 30 days that you got a great bargain, send it back without paying a cent to us. Now, are you interested? If so, send for our catalogue. It contains a full line of late style rigs, also complete line of harness.

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COMMENT

The Editor of the FARM AND FIRESIDE takes this occasion to express his sincere thanks to each one of the many readers who have responded to the request in the April 1st issue of the paper for their suggestions, criticisms and choice of departments. Almost without exception, however, you have gone beyond mere compliance with the terms of the request, and added testimonials of the strongest kind on the merits of the FARM AND FIRESIDE. For these testimonials we also heartily thank you. Your words of praise are most gratifying and encouraging to us, and the expressions of your ideas and wishes are very helpful. We are delighted at the interest manifested, and appreciate your kind favors.

Readers, this issue of the FARM AND FIRESIDE comes to you with a new "make-up." The purpose is to present the reading matter to you in a more attractive form. Kindly bear in mind, as you look over the paper and note the changes made, that improvements are not to end with this issue. For instance, not all the various departments are arranged in the exact order in which they may appear in future issues.

However, in studying the changes made, your attention may be more closely called than ever before to the broad scope and high character of the FARM AND FIRESIDE as a farm and family paper. In its pages you will find something about important affairs and notable men of the day; practical, common-sense ideas on general farming, gardening, fruit-growing, poultry-raising, live stock, the dairy, etc.; a grange department unlike that of any other paper; illustrated specials on rural life and industries the world over; sound legal advice; plain instruction in hygiene; interesting topics for all in the home circle; bright and helpful things for the busy housewife; select, serious reading; fiction, clean and wholesome; choice verse, and flashing specimens of wit—a great variety in small space and all of the highest quality.

A word about the new departments: Under "The Family Lawyer" Judge Rockel will answer legal inquiries of general interest; under "The Family Physician" Doctor House will tell plainly how to preserve the health of the household; and under "How to Dress" will be found the correct fashions of the day.

AFFAIRS OF NOTE AND MEN OF MARK

The drastic Chinese Exclusion Bill passed by the House was defeated in the Senate, and a substitute adopted continuing in force the provisions of the Geary Act, about to expire by limitation, and applying the present law to the Philippines and other insular possessions of the United States.

April 16, 1902, General Chaffee cabled from Manila, "Unconditional surrender of Malavar to General Bell to-day. Organized resistance to the United States is terminated in the Department of the Philippines."

Thus the short span of time from Dewey's May Day in 1898 covers a period of naval and military operations by the United States in the Orient marking one of the greatest epochs in the history of the world.

THE CUBAN RECIPROCITY BILL

After a long struggle between contending interests, from which the adroit beet-sugar men came out winners, the House has passed a Cuban reciprocity bill. In the party caucus the beet-sugar men secured a compromise of twenty-per-cent reduction of tariff duties instead of the sixty or more desired by other interests. In the House they forced an amendment to the reported bill, removing the differential on refined sugar during the period the provisions of the bill may be in effect—a bitter dose for the trust refiners.

The bill as passed by the House authorizes the President, as soon as may be after the establishment of an independent government in Cuba and the enactment by said government of immigration, and exclusion and contract-labor laws as restrictive as those of the United States, to negotiate with Cuba a reciprocal treaty agreement, by which in return for equivalent concessions the United States will grant a reduction of twenty per cent from the Dingley rates on imports from Cuba; such agreement to continue until December 1, 1903; and while said agreement shall remain in force the differential duty on refined sugar shall be abolished.

HORSES IN DEMAND

In spite of the rapidly widening use of steam and electricity for traction-power, and the increasing substitution of portable mechanical power for animal-power on the farm, the "horseless age" is not yet in sight.

The *Crop Reporter* for April in reviewing the horse and mule trade of the United States with foreign countries shows that it has now reached a magnitude unprecedented in the history of the country. From 1893 to 1901, fiscal years, the exports of horses and mules increased from four thousand six hundred and one head, valued at less than one million dollars, to one hundred and sixteen thousand six hundred and fifty-five head, valued at over twelve million dollars. The total exports of horses and mules for the first eight months of the current fiscal year amounted to ninety-two thousand one hundred and thirty-six head, valued at over nine million dollars.

The *Crop Reporter* says that the extraordinarily heavy exports of horses in 1901, amounting as they did to eighty-two thousand two hundred and fifty head, were due primarily to shipments of thirty-seven thousand four hundred and sixty-five head to South Africa; but that if this factor be entirely eliminated from the trade there is still apparent a remarkable and almost steadily increasing demand in both North American and European countries for horses bred and reared in the United States.

A NEW FOREST RESERVE

In the West there are forty-one national forest reserves, with an aggregate area exceeding forty-three million acres. The policy is as wise for the Appalachians as for the Rockies. Representative Moody, of North Carolina, recently reported to the House a bill to establish a national forest reserve in the Southern Appalachian Mountains. His report states the purpose of the reserve to be the protection of the timber supply of that region, the development of its farming resources and the regulation of the water-flow in its streams. The bill authorizes the Secretary of Agriculture to purchase not more than four million acres of land in the mountains of Virginia, North and South Carolina, Georgia, Alabama and Tennessee. The proposed reserve extends from the southern part of Virginia and West Virginia to the northern part of Georgia and Alabama, and embraces the greatest mountain mass east of the Rockies, with the richest forest and finest scenery.

Of Mr. McKinley's original Cabinet the only member now remaining is James Wilson, Secretary of Agriculture. Being a very earnest and consistent advocate of the building up of our beet-sugar industry, Mr. Wilson is in opposition to President Roosevelt's Cuban reciprocity policy. But this, however, does not mean that he will not remain in the Cabinet, and continue to be one of the President's best advisers.

William H. Moody, who now succeeds John D. Long as Secretary of the Navy, was born in Massachusetts a little more than forty-eight years ago. He graduated at Harvard in 1876, practised law successfully for several years at Haverill, served his state as a district attorney from 1890 to 1895, and as one of its best representatives in Congress from 1895 to the present time. He has distinguished himself in the House as a tactful leader and forcible debater and as a useful member of the Committee on Appropriations and of the Committee of Insular Affairs. Mr. Moody is a man of strong mind, sound judgment and high character.

Rear-Admiral Robley D. Evans is just about due to arrive in the Orient, where he will succeed Rear-Admiral Kempff as the junior commander of the Asiatic Station, now the largest division of the United States Navy. Popular "Fighting Bob," affectionately so named by his men for his coolness, courage and ever-readiness, was born nearly fifty-six years ago in Floyd County, Virginia, and lived there until his tenth year on his father's farm. From September 20, 1860, when he was appointed to the United States Naval Academy, all the years of his life have been patriotically given to the naval service of his country. It is generally known that in the "Captains' fight" at Santiago the battleship Iowa, under command of Captain Evans, was the first to discover Cervera's squadron outward bound from the harbor, first to fly the signal, "Enemy's ships coming out," and first to fire the warning gun, and suffered the most damage in action. But the fact is not so well known that the wrecks of the three Spanish ships which did the bulk of the fighting showed that of all the large-caliber shots that struck them, more came from the Iowa than from any other American vessel.

In a rock-hewn tomb, Rhodesia, Cecil John Rhodes will rest. But, as Mr. Kipling writes:

There till the vision he foresaw,
Splendid and whole arise,
And unimagined empires draw
To council 'neath his skies,
The immense and brooding spirit still
Shall quicken and control;
Living, he was the land, and dead,
His soul shall be her soul.

Like Clive and India, the name of Rhodes will be forever linked with South Africa, where in due time shall be a mighty commonwealth of law, liberty and equal opportunity, for Black, Boer and Briton alike. To-day his remarkable will is the talk of the world. By Oxford scholarships he hoped to promote a friendship federation of the Teutonic peoples, declaring, "For a good understanding between England, Germany and the United States will secure the peace of the world, and educational relations form the strongest tie." Of the man Kipling writes:

Dreamer devout by vision led
Beyond our guess or reach,
The travail of his spirit bred
Cities in place of speech.

So huge the all-mastering thought that drove
So brief the term allowed.
Nations, not words, he linked to prove
His faith before the crowd.

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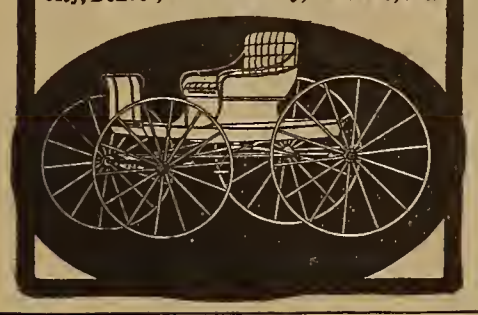

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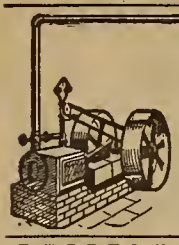

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Mr. Greiner Says:

A reader speaks in high terms of "gray mineral ash," a natural product of alkaline character, advertised as a powerful insecticide. Who has tried it?

I doubt whether a better honey-plant has yet been found for general culture than Alsike clover. People who keep bees will do well to mix at least some of it with any lot of clover-seed they sow for hay or pasture.

The best informed of us are groping more or less in the dark about the true effects and use of the different chemical manures. Even the fertilizer experts, manufacturers and dealers cannot, or will not, solve all the problems for us. We must rely on our own tests and experiments on each particular soil.

No doubt, as Professor Thorne says, the mission of sweet-clover seems to be to occupy the waste places and neglected spots of the earth and to prepare them for the growth of other plants. But is it true that its appearance is always a signal that the soil is out of condition? There are hundreds of acres of apparently good soil (in the suburbs of Buffalo, for instance) covered every season with a perfect mass of sweet-clover five or more feet high. It is a biennial, and can be killed out in two years. But how the bees revel in these fields during the blooming season!

HAND POTATO-PLANTER

A reader in Minnesota asks how hand potato-planters compare with other methods of planting. The best and most satisfactory hand-planter that I know of is the human hand; that is, the hand of a lively and careful person. It is only in large operations that machine-planters (horse-planters, not hand-planters) can come in consideration for profitable use.

STRAWBERRIES

AMONG BUSH FRUITS.—A reader in Butler County, Ohio, asks about growing strawberries among bush fruits, especially grapes. Although strawberries will grow where there is some slight shade, they will be better and more of them and grown much more easily and conveniently when planted in an open spot where no other crop interferes with them. Strawberries for business are usually grown all by themselves. Yet I have seen fairly good strawberries in a matted row between two rows of grape-vines or other bush fruits, or among young orchard-trees. Combinations of this kind, however, usually interfere more or less with proper and convenient means of cultivation. Besides, where a double crop is expected, double doses of manure must be allowed. Grape-vines and similar things draw heavily on the plant-foods in the soil, and even the very center strip between two rows of grape-vines—that is, the strip furthest away from them and presumably from the roots—seems to have its resources drawn upon to such an extent that strawberry or other plants will not grow as freely and thriftily as where they are the sole occupants of the ground. For all these reasons I and other experienced growers, or growers for business, prefer to have our strawberry-patches in the open ground without intermixture and interference except possibly for a year or two, when grape-vines, raspberries or blackberries, etc., have been started anew and while the bush-fruit plants are yet small and feeble.

PEDIGREE STRAWBERRIES.—It is an excellent theory to work by; namely, that we must select strawberry-runners for propagation only from perfectly healthy, strong, vigorous and most productive plants. If we allow our parent plants to be weakened by the cumulative effects of yearly attacks of fungous diseases and insects we must expect to grow weaklings. Every following generation of plants must be weaker than the preceding generation. Why take runners from a bed that was burnt up with the rust a year ago, and possibly the year before that, too? Why continue propagating disease-tainted plants? The sins of the father will be visited upon the children to the fourth or fifth generation. Disease is a bad inheritance. Why not breed for strength and health and productiveness? But practical results are not always bearing out our theoretical teachings. For some years I had test-plants of the Wilson, taken from our ordinary beds in this vicinity and of plants sent out by our Michigan friend as "pedigree" Wilsons, and if there was any difference it seemed to be in favor of our own. This, however, may not prove the inferiority of the plants from Michigan, but only give evidence of the excellence of our home stock. Our beds, especially of Wilson, Splendid, Warfield, etc., are usually free from disease, and are of extraordinary thrift in foliage. Consequently we may consider all our plants "pedigree" stock." Not every strawberry-grower, however, is as lucky in this respect.

VARIETIES.—It is not safe to make general recommends as to varieties. Mr. Kellogg, of Michigan, a strawberry expert, said before the Western New York Horticultural Society at its last meeting, "When you come to recommend varieties of strawberries there are so many that will do well in one particular locality and not well in another that it is exceedingly difficult to do. The best you can do is to experiment; try Senator Dunlap. I have fruited it every year for five years. Then we have the Clyde, which is very popular on some soils, but fails on others. If you haven't got strong, rich soil that will enable it to do its heavy work, don't set it on it." Strange to say, I have never had the Dunlap. I have the Clyde and many others. One of my very choicest is the Brandywine. It does much better with me than Bubach (No. 5), and a great deal better than the Rough Rider, for which such great claims were made a couple of years ago. For canning we like the Brandywine just as well as our old canning favorite, the Wilson. Clyde and Brandywine undoubtedly require strong soil; but it may be said that the majority of strawberries will do well under high culture—that is, on strong, heavily manured soils. Manure and cultivation are the things that make big strawberries and big crops. For ordinary soils and treatment I would recommend Haverland, Wilson, Warfield, Splendid. Haverland often gives an immense yield of fairly good and fair-sized berries under somewhat indifferent treatment, but as a pistillate or imperfect-flowering variety it must have some other sort, like Splendid, Wilson, etc., planted close by or in mixed rows, in order to insure free fruit-setting. Experiment will show which do best in your locality.

Mr. Grundy Says:

A WELCOME SPRING.—Never a spring in history was welcomed by farmers more than this one. Thousands are almost or quite out of feed for their stock, and to them the green of the pastures is more than beautiful. The advice to keep stock off pastures until grass is well started was not heeded this spring, but the cows were nipping at it as soon as it could be nipped.

PLANT A SOILING-CROP.—This early pasturing and trampling will surely make short pastures in summer, and every farmer should provide for the shortage of forage by planting a soiling-crop of sweet-corn, sorghum or something of that sort. I have tried many different plants for this purpose, and several years ago found sweet-corn the best.

SWEET-CORN NOT GOOD FOR DRY FODDER.—Replying to three or four inquiries, I will say that I never have been able to make good fodder of sweet-corn. It will mold in the shock and also in the mow. I have put it into very small shocks to see if it would keep, but the first soaking rain started the mold. It will keep very well in a dry place when so placed that the air will circulate through it freely. It will keep in good condition when mixed with common dent-corn fodder and kept in a dry place. I would not advise any one to plant it for fodder, however. Its chief value lies in its use as a soiling-crop at a time when pastures are getting short and it is advisable to keep the stock off at least a portion of every day.

PROSPECT FOR A GREAT CROP OF CORN.—I notice the majority of farmers are preparing to plant a large area this season, and the general opinion seems to be that owing to the drought and intense heat of last season the soil is full of available fertility for this year's crop. If the season is ordinarily favorable there will be the greatest corn crop in the history of the country raised this year. The soil in my locality turns and crumbles better than I have seen it do for many a year. Even when it appears to be a little too wet to plow well it falls from the share of the plow just as a farmer likes to see it. Now, if farmers will give the crop the best care there will be no empty cribs next fall if the season proves reasonably favorable.

GOOD SEED THE FOUNDATION OF THE CORN CROP.—It has been rumored that the acreage of corn will be diminished this year by lack of good seed. This is the silliest sort of nonsense. In some localities where the drought was most severe last season there is a great lack of seed, but the grain-buyers in those localities have ordered an abundant supply from other parts of the country, and seed of excellent quality can be had in any quantity at fair prices. Farmers should not hesitate to pay a fair price for good seed, for that is the foundation of the crop. Poor seed is dear as a gift. I have seen men plant doubtful seed rather than give a dollar a bushel for that which was proved to be sound and good, and in consequence lose a crop.

WHAT TO PLANT.—To give a large yield sweet-corn should be drilled in rows about three feet apart and two or three grains to the foot. If the land is rich it will make a rapid growth and make excellent feed from the time it tassels until it is almost ripe. The small, early sorts are too small to be of much use for soiling. One should plant the medium early, like Crosby's, for the first cuttings, and Evergreen for the main crop. I have grown Evergreen to a height of eight or nine feet on rich soil, and both cows and horses would eat the entire stalk when run through a feed-cutter, and very nearly all of it when fed whole. I am satisfied that I get a greater bulk of green feed from an acre of sweet-corn than anything else except sorghum, and I think it makes a much safer and better feed than sorghum.

PLANT EARLY VARIETIES IN LATE SEASONS.—If from any cause one should not obtain a good stand of corn and find that it will be necessary for him to plant the field over again, he should plant an early-maturing variety. About the middle of June a few years ago I called on a young farmer acquaintance and found him just beginning to plant a twenty-acre field a second time. The first planting had failed because the seed had been put in too deep. Heavy rains had packed the soil down and smothered it. Looking into the seed-boxes, I found that he was about to plant a large, late white variety. I said he was making a mistake. After talking the matter over he unhitched one of the horses and rode to a neighbor's and procured a smaller, early-maturing variety and planted it instead. An early frost caught all the late corn that season, but the early variety planted by the young farmer mentioned had just passed the danger-line when it came, and the yield was something over forty bushels of sound corn to the acre.

ADVANCED METHODS.—The growing of a crop of corn is not the man-killing task it used to be. We used to trudge up and down the field from early morn till dark, following a twelve-inch plow, and come in tired enough to drop in our tracks. That was clodhopping pure and simple. Then we harrowed, marked and planted, always trudging, until life seemed a burden that we would gladly lay down. Most of the cultivating was done with double-shovel plows. Now how different! We ride a sulky or gang plow, harrow as we go along, ride on the planter, ride on the slanting-tooth harrow that pulverizes the soil and destroys the weeds until the corn appears, and ride on the cultivators that we cultivate the crop with, and in every case do sixty to eighty per cent better work than we did when we trudged and clodhopped. No wonder farmers are rapidly advancing in skill and general intelligence. They now have time to read and are not too nearly worn out to think. I have seen a farmer's boy so worn and wearied by the day's work that after putting up his team he would drop down beside the stable and sleep while I milked a cow or pumped water for the stock. Though tired as he, I would often do his share of the chores while he slept, to save him from a scolding. I was a hired man then. Now such boys are attending school and college and the hired man is doing the work both then did—doing it more than twice as well—and riding while he is doing it.

All Over the Farm

SUBSOILING

THE SUBSOIL.—That body of soil lying below the depth to which the breaking-plow runs contains a large amount of plant-food. Examination of the root systems of most cultivated plants shows that roots descend into the subsoil to considerable depths. They would not do so—could not do so—if they did not get food along the line that they made growth. The depth to which the roots of our plants go below the surface depends upon the nature of the soil, the dead water-level and the kind of plant, but generally speaking they descend to a depth of several feet. As land becomes older, the conditions favoring deep-rooting grow poorer. There is less air in the subsoil to make plant-food available. Old forest roots have given away, and the cavities left by them have become filled up. The tramping by teams on the bottom of the furrows as the plow has run at the same depth year after year, and the pressure of the plow upon it, pack it, clogging the pores. Water gets away from ground less readily as it grows older, and its presence in excess destroys good physical condition.

All these things suggest the thought of subsoiling. Some farmers do not appear to have a clear idea of the nature of this work. It consists merely of breaking up the soil in the bottom of the furrow with a plow so constructed that the subsoil is not thrown out upon the surface of the land, but falls back into place. The subsoil-plow follows the breaking-plow, and as the breaking-plow comes around its furrow-slice is turned over upon the loosened subsoil. The surface-soil is left where it belongs as usual, and the subsoil has been made loose to a depth of six inches or more instead of being left unstirred.

A RISK IN SUBSOILING.—Actual damage to the soil from subsoiling may result in the following way, so well stated by Professor Storer. He says, "In view of what is known about the puddling of soils it is now easier than it was formerly to understand one very important point in respect to the use of the subsoil-plow; that is, the risk there is of puddling a clay subsoil when this instrument is used upon it at an improper season. A soil may be in excellent condition for tilling at the surface, and yet be too wet below—so wet below that the action of a subsoil-plow would be to simply knead and pack the earth to a firm, tenacious dough, impervious to roots and to capillary moisture. In this event subsoiling would do far more harm than good. The question when best to subsoil is really a perplexing one, for with land of the supposed quality it would not be easy to hit upon a time when the soil is fit to plow both at the surface and beneath. All this the farmer must consider, and must try to get as near the desired point as may be practicable. It is evident enough that late summer or early autumn would be the natural time to approach the subject, for in spring the moisture dries out from the land slowly. But the trouble is that if the subsoiling be done in autumn the ground will subsequently settle somewhat in the course of the winter, and there would thus be lost a considerable part of the effect which in the case of spring plowing would have served to benefit a crop. Hence it has been urged that it is best to wait long enough in the spring until the condition of the land is fit, and then after subsoiling to put in some late crop, such as fodder-corn, millet, or any late soiling or ensilage crop—perhaps even buckwheat."

WHERE TO SUBSOIL.—The work is somewhat expensive, but not seriously so. All means of soil-improvement cost money. But subsoiling seems to me to come in most rationally when fitting land to produce a good cash crop that may be expected to make returns for some soil-improvement without much delay. A good plow for the purpose will cost about ten dollars. The work calls for an extra team and man while breaking the ground. It cannot be done well or economically when the ground is dry and hard, and the danger of stirring the subsoil when wet is made plain by Professor Storer. The work can be done most satisfactorily when a leguminous crop, like cow-peas, is to be grown for soil-improvement the year before corn, potatoes or other such crop is to be planted. In such case the breaking can be done any time in May when the ground is right. The breaking-plow should be run as deep as the soil will warrant, and the subsoil-plow should be set to go as deep in the bottom of the furrow as the team can draw it. Such a loosening and airing of the ground should do good in the case of all clays. The chemists tell us that there are many thousands of pounds of inert fertility in our soils below plow-depth, and air is needed to assist in securing the availability. The light color of a subsoil does not necessarily indicate a state of poverty, but rather an absence of needed air. When soil is thrown upon the surface in ditching it often becomes very productive. The color changes upon full exposure to the action of the air.

EFFECT UPON MOISTURE.—We have learned that deep plowing aids a soil in retaining moisture during a drought. Subsoiling increases the supply of loose soil capable of storing up moisture. Dead water in the soil is a hindrance to plant-growth, but all the moisture that can be held about the soil-particles is a help. The deeper a soil can be made loose, the more moisture can be held in this way.

On the other hand, in case a hard-pan exists just below the plow-line, as is so common in many sections of the country, subsoiling provides needed drainage for the surface-soil. At the New Jersey station a good stand of alfalfa was gotten on hard-pan land that is naturally fatal to such a crop as alfalfa, the subsoil-plow breaking through the hard-pan so that surface-water was drawn off, and the roots could go down into a bed of sandy loam.

AN EXPERIMENT.—I have sought to point out the favorable results that may be hoped for from subsoiling. In many instances these results have been secured, and there should be more experimenting done by farmers along this line. But there is a less encouraging side. On account of the hard labor, possibly on account of some puddling of the subsoil by stirring it when too wet, and probably on account of the tendency of the subsoil to run together because it lacks organic matter to keep it porous, this means of soil-improvement has never become popular. It has paid in some instances, and I believe that it would pay in many others if the work were intelligently done in the way and at the time I have indicated. DAVID.

GROWING LOCUSTS FOR FENCE-POSTS

No timber has ever been found that lasts as well as locust—the ordinary locust so generally used fifty years ago for ornamenting lawns and streets. The fact that it made good posts was well known, but when a supply was wanted it was discovered that there was none in the market. This experience of many farmers in eastern Indiana may well be taken as similar to that of others in various sections of the country. After becoming convinced that locust was good for posts many farmers started to raise a grove of the valuable trees. Seeds were procured and planted, but not one in a hundred would grow, and the disappointed farmers tried setting out shoots that had sprung from living roots. These were carefully taken up and set in squares ten feet each way, but they did not grow right; they branched out and became forked and bushy. After repeated failures of this kind discouragement followed, and no further attempts were made by those who started out in good faith to raise their own fence timber. Many years of valuable time were wasted because the experimenters did not know how

PART OF A LOCUST GROVE FOURTEEN YEARS OLD—A SECOND GROWTH

to germinate locust-seeds. As is well known, seeds of the locust-tree have a hard, thick shell, with a small kernel. If these seeds are planted without having been previously treated not one out of ten will grow, and that one will be so late in starting through the ground that fall frosts will catch the tender shoot and bite it off to the ground.

Locust-seeds must be started artificially, and the only known method that is always successful was introduced in Wayne County, Ind., by Rudolph Ellenbarger, a native of Pennsylvania, whose father learned the secret in Germany. The seeds should be gathered in the fall and kept dry through the winter. About the middle of April the seeds should be placed in a vessel and boiling water poured over them, all the time stirring them and continuing to stir until the water becomes some cooler. This should be done in the morning. Let the seeds remain in this water until the next morning, when the water should be poured off and boiling water again poured over them, the stirring process being repeated as before. This should be kept up for five or six mornings in succession, when the seeds will be seen to have a tiny sprout protruding from the shell. After digging a trench in the garden, take clean sand and place a layer in the bottom of the trench. Then drill the seeds on the sand, and cover with a shallow covering of sand, and on top of that a layer of dirt. The shoots will appear in May, and grow large enough the first year to withstand the effect of frost. The next April they should be set out in rows ten feet apart each way, and the ground kept clean and free from weeds.

Mr. Ellenbarger, who introduced the locust-tree in eastern Indiana, planted one and one half acres of thin, rough ground in locusts. The piece of land was so disposed that it was unfit for cultivation. The trees grew rapidly, and when they were ten years old he sold them for three hundred dollars as they stood. The trees were taken off close to the ground, and almost immediately shoots began to appear through the soil from the living roots of the stumps. Mr. Ellenbarger took a cutter-plow and thoroughly tore up the soil between the stumps, cutting as many of the roots as possible. This caused the roots to send up countless shoots until the ground was fairly thick with them. They were all allowed to stand without thinning. The second year it was seen that the stronger shoots had crowded out the weaker ones, and finally within three years the remaining saplings were disposed over the ground about one to every five feet square. They grew in this way to maturity, or to a size suitable for posts, when they were removed and the root-breaking process repeated. The second crop was sold for a larger sum than the first. Again the shoots appeared; and again the strong smothered out the weak ones until the only ones left were those selected by Nature.

The accompanying illustration is of a grove fourteen years old. Many of the trees are ten inches in diameter and tall enough to make eight or ten cuts seven feet long. Most of the lower cuts can be split into four posts each. A single tree will yield twelve to twenty-five posts, and some even more than that. These posts sell for twenty-five cents each in country markets, and doubtless for more in cities or places remote for timbered lands.

Thirty years ago Mr. Ellenbarger set several hundred posts. Last summer that fence had to be removed, and Mr. Rudolph Hoover, who now owns the land, found the posts apparently as sound as the day they were set. He believes they are good for another thirty years. At any rate, he considered them good enough to use in a fence that otherwise was new. The wood was firm and held nails like new stuff. That they will outlast iron posts is well established.

Locusts in groves never need pruning; they trim themselves naturally. Weeds and underbrush will not grow about locusts, while pasture-grasses thrive right up to the trunks. They make a pleasant shade, and they are another source of profit by furnishing honey for bees. C. M. GINTHER.

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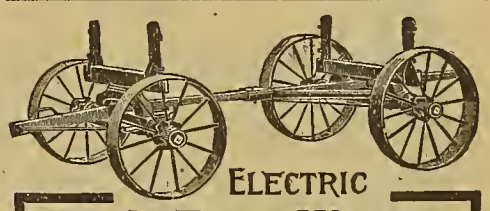

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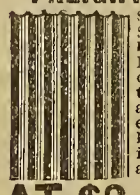

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In the Field

The "know-how-man," be he farmer, mechanic, engineer or electrician, is the man of the hour. He is the man who succeeds where others fail.

Mr. John Bellew, of Rocky Ford, Col., won the prize for the best crop of sugar-beets. In his statement he allowed seventy-five cents a ton for the pulp for feeding purposes, and seven dollars and fifty cents for the tops grown on each acre. The land was irrigated three times during the summer.

As an example of how land-owners can aid young men who have wisely determined to be farmers is shown in the following one: A young man in central New York has just purchased a two-thousand-dollar farm to be paid for entirely in potatoes, the former owner agreeing to take all the marketable potatoes the young man can raise at forty cents a bushel.

HOW MUCH SOLUBLE?

Manufacturers of fertilizers, merchants and farmers are equally interested (or should be) in the spread of knowledge as to the real nature and wise use of all commercial manures. All buyers of superphosphate should insist upon being informed as to how much of water soluble phosphoric acid the manure is guaranteed to contain.

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Recent experiments conducted at the Elsenberg Experiment Station show that basic slag and superphosphate as phosphatic manures in every case gave the best results. Of the two manures the basic slag has proved superior, considering its cheapness; also from the fact that superphosphate exhausts itself in the course of the first year, while the basic slag may be expected to show its influence for at least two more seasons. The best results from the use of the basic slag (or Thomas phosphate) are obtained by harrowing it in a few months before seeding with wheat, other small grains or grass-seeds. * * *

A NOVEL RURAL TELEPHONE SYSTEM

Some of the farmers of Larimer County, Col., are making use of a rather novel kind of telephone system. It is nothing less than a system by which messages are transmitted over the barbed-wire fences of the neighborhood. The barbed-wire system has now been in use for some time by a neighborhood of farmers near the North Poudre irrigating-canal some ten miles north of Fort Collins. It was inaugurated by Sherman C. Grable, superintendent of the North Poudre Land and Irrigation Company, to communicate with the farmers on the lands and others taking water from the company's ditch. It was found to be of such excellent utility that it has been extended from time to time, until now about fifteen miles of wire is in use for telephone purposes, and twelve boxes in operation. Mr. Grable's headquarters are in the neighborhood, and are used as a sort of local telephone exchange. Five separate branches reach out from Mr. Grable's office into the surrounding country. Farmers and farmers' wives use the system constantly in communicating with each other, Mr. Grable and with people in Fort Collins.

The system is extremely inexpensive. A few connections of course have to be made, such as crossing of a highway from fence to fence or the spanning of a gateway. This is effected by erecting poles and carrying the connecting wires over roads or gateways. Each patron, of course, must buy a box and connect it with his fences at a point most convenient to his home. H. A. Crafts.

Correspondence and Comment

Broom-corn.—T. P. C., Walnutridge, Ark. Plant broom-corn seed with a planter, in drills about four feet apart. Thin out the plants to one every six or eight inches in the row. Cultivate just as you would field-corn. Before the brush gets its full growth break it down, or "table" it, and cut it before it gets too ripe, to prevent it from becoming crooked and to retain the bright green color. For book on broom-corn culture write to the Orange Judd Company, New York.

From Missouri.—People seeking homes will find Henry County a good country, and as cheap farms here as anywhere. Improved land is selling for from twenty dollars to thirty-five dollars an acre now. Can that be beaten, considering our advantages to markets and railroads? J. B. R.

Urich, Henry County, Mo.

From Oklahoma.—I came to Oklahoma in the race for the Cherokee Strip, and have lived here ever since. Most people were very poor when they started here, but this country is improving very fast. The principal product is wheat. We generally have too much dry weather for corn. Pondcreek, the county-seat of Grant County, has five elevators and one large flour-mill. Land is rising rapidly in value. G. T.

Pondcreek, Grant County, Okla.

From Florida.—Duval County is adapted to the raising of fruits and vegetables. Any one who is not afraid of work can make a good thing here. A greater part of the land can be easily cleared. Peaches, plums, grapes, pears and various other fruits grow well here. Irish potatoes and sweet-potatoes make enormous crops. Land can be bought cheaply, as the greater part is still uncleared. The summers are long, but not very hot, and we have very little winter. Corn makes a great yield when manured a little. There is an abundance of both fresh and salt water fish.

Duval Station, Duval County, Fla. A. W.

From Tennessee.—Walden's Ridge is a spur of the Cumberland Mountains. It is twelve miles wide here. The soil is thin, sandy and porous. For a healthful place this mountain ridge cannot be surpassed. It has become famous as a summer resort, and many people of the surrounding valleys spend the summers here to regain their health. There is nearly always a cool breeze during the summer. The air is pure and invigorating. There are plenty of mineral springs. Apples, peaches, pears and all fruits do well. Irish potatoes and sweet-potatoes are grown to perfection by using a little manure to enrich the land. The C. S. railroad runs along the foot of the ridge for many miles. J. M. B.

Mowbray, Hamilton County, Tenn.

From California.—If I tell your readers something about California strawberries they will take it as California brag. I am an Ohio boy who came to California in 1892, and have been in the fruit business ever since. We have strawberries the year round. In the winter season we get the best prices. I picked from three thousand plants set out in February, one year ago, three crates a week, thirty three-fourths-pound boxes to the crate, about twenty-two pounds of fruit. Ninety boxes at twenty-five cents a box brings twenty-two dollars and fifty cents. In summer we have a large amount of fruit, and the price goes down as low as seven cents a box. This variety is the Brandywine. We plant in September, and in two months commence getting fruit. The older they get the more fruit for two years. One acre will give us one thousand dollars a year. Now, I know by a mode of culture one can have strawberries in Ohio about four months. I thought I knew something about farming back in Ohio, but I find I was only in my abc's. In raising vegetables and small fruits we plow deep, and then harrow and cross-plow before we plant the seed. We are in the "frostless belt," so we say, but we had a little frost last December. This belt extends along the ocean, two miles wide and twelve long. D. D.

Prospect Park, Los Angeles County, Cal.

Gardening

By T. GREINER

ONION-PLANTS HARDY.—No need of hardening onion-plants off. They stand the direct transfer from greenhouse to open ground quite well.

GROWING MUSHROOMS NO CHILD'S PLAY.—Often we will find it easier to grow mushrooms on the greenhouse benches, where we do not plant them, than under the benches, where planted in carefully prepared beds—that is, where mushrooms have once been grown.

AMONG THE VEGETABLE NOVELTIES sent out by our brethren across the water is a "Miniatur" head lettuce, claimed to make rather small but delicate heads of exceptionally fine quality; also a soup, or cutting, celery, said to produce a big bunch of stalks and parsley-like foliage.

OLD SEED OR NEW?—What gardener would not rather plant new seed than old? Yet I never throw old seed away unless a test shows it to be of doubtful vitality, or unless I know it to be poor. Leaving parsnip and possibly egg-plant out of consideration there is hardly a garden crop the seed of which would not readily grow the second season when properly kept over. I plant lots of old garden-seeds, and seldom notice much or any difference in the results in favor of the new seed. But I risk no important crop unless I have good reason to consider the seed good.

DAMPING OFF

The experience of F. F. B., a reader in Lynnport, Pa., is only that of a good many other people. Cabbage-seed sown in boxes or on the greenhouse bench often sprouts freely, and the young plants for a while seem to grow nicely. Then all at once the stems at the ground dwindle, dry or rot away, and the plants fall over and die. Even old gardeners often lose a large portion of their plants in this manner. The disease is due to a fungus known as the "damping-off" fungus. I have tried everything I could think of for the prevention of this troublesome malady, and found several methods of treatment that promise success. One of the surest plans is the sterilization of the soil. Expose the soil for an hour or more to a moist heat of two hundred or more degrees Fahrenheit, and then prepare it for planting. The treatment will surely destroy the infection so that the plants, unless infected from some other source afterward, will be free from damping off. If it is only a box or two that we wish to plant, the box containing the soil may be put into the oven of a common cook-stove, with the heat turned on as for baking, and left there until thoroughly heated through.

OTHER CURES FOR DAMPING OFF.—Where plants are grown on a somewhat larger scale, and a considerable quantity of soil has to be sterilized, steam-heat is almost indispensable, the soil best being packed directly over steam-pipes placed rather close together, and the heat kept in by a suitable covering. My usual way is to prepare a bed (on the greenhouse bench) of ordinary good, fibrous loam, possibly treated with a sprinkling of air-slaked lime, then sow the seed in shallow marks less than one half inch deep, and cover with finely sifted coal-ashes, the latter perhaps containing traces of wood-ashes from the kindlings. The seed usually germinates promptly, and the plants remain healthy. A few weeks ago, however, I noticed that the plants in parts of the rows began damping off badly, and prompt action was required. I made a solution of permanganate of potash strong enough to give a bright-colored liquid, and with this I gave the bed a good overhead watering, so that the liquid ran down the stems of the plants and soaked down clear to the roots. It checked the spread of the disease at once, and I now have a good lot of healthy plants.

Fruit-Growing

By S. B. GREEN

BOLTING SPLIT TREES.—Q. T., Van Wert, Ohio. The best method of fastening together the branches of trees which are split down at the trunk is to put a bolt through and fasten it up solid. In small trees a wire spike or nail will often answer to good advantage, and hold the tree together until the wound can grow fast.

YELLOW POPLAR.—H. D. C., Eminence, Kan. The true poplars (by this I mean those belonging to the genus Populus) nearly all root easily from cuttings, but the tree that is known by the name of yellow poplar, which is a native of central United States, does not grow from cuttings, but can be easily grown from seed. This tree is not a poplar, strictly speaking. Its botanical name is Liriodendron Tulipifera.

CHERRY SPROUTS.—L. P. J., Shelby, Mich. Where cherry-trees are on their own roots the sprouts that come out from around them may be used for propagation purposes, and will make good trees if they are taken up carefully with a short piece of the main root from which they spring. If they are simply pulled, and so have but a small, straight root, they are very apt to fail. If the tree is grafted and sprouts appear, these may be dug, planted out, and, after being well established, grafted or budded with some named kind. But as a rule I think it will be found more profitable to buy seedling cherries and to graft them than to bother with grafting or budding the sprouts.

COAL-ASHES—SALT.—G. A. H., Van Wert, Ohio. Neither hard nor soft coal-ashes are of any special value as a fertilizer, and it does not matter whether they are kept wet or dry, even if they are to be used upon the land, for which purpose they can sometimes be employed in order to change its physical condition, although they in themselves do not furnish any plant-food to the soil. They may be used in small quantities on heavy clay land, and will tend to make it more porous, and likewise on sandy soil have a tendency to make it somewhat more compact and retentive. They are excellent to use around young orchard trees as a mulch and to prevent the growth of grass and weeds where the land is seeded down. For this purpose they may be put right against the trunk of the tree without injuring it.——Common salt in small quantities is ofttimes helpful to fruit-trees, but its effect is not so good that it is customary to use it for this purpose. A better material to use would be kainite, or some of the other German salts containing muriate of potash. All these latter salts contain more or less common salt as well as potash.

PEACHES, GRAPES—FERTILIZERS FOR LAWNS.—T. C., Attica, Ind. The good selection of peaches for a succession in your section is as follows: Alexander, Early Crawford, Elberta, Late Crawford, Smock, and of grapes, Green Mountain, Worden, Concord, Pocklington, Campbell's Early. These are all good, vigorous, healthy kinds, and will not only give you a succession, but give you a considerable variety.——Of the farm fertilizers perhaps none is better for the lawn than the scrapings from the barn-yard, or other similar material that is thoroughly well rotted and fine. But in my own practice I have nearly given up the use of stable manures for lawns, and in place of it use the stock-yards fertilizer known as ground-tankage. This costs about twenty dollars a ton, and is quite rich in nitrogen and phosphoric acid. It is much more easily applied than the stable manure, and is not unsightly, although there is a pretty strong odor from it for a few days after it is put on. If the grass roots seem to be pushing up out of the soil it is a good plan to put on in addition about one inch of fine, black loam. Where lawns are in bad condition and immediate results are wanted, and yet there is not the opportunity to make a thorough job, I got most excellent results in this way: Apply ground-tankage at the rate of six hundred pounds an acre, or about three pounds a square rod, and nitrate of soda at the rate of one hundred and fifty pounds an acre. This latter should be watered in at once, and acts almost like magic in improving the grass. The effect of the nitrate of soda is very quick, but not lasting, and the tankage is quite a lasting fertilizer, so together they give excellent results. If in addition to this a small amount of loam is applied to the surface of the lawn, so much the better.

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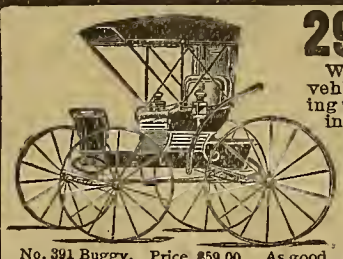
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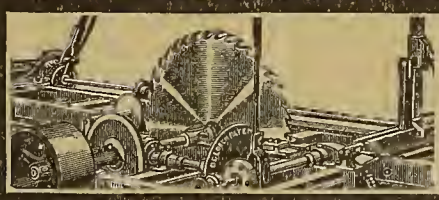

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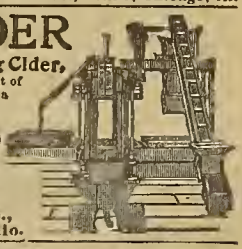

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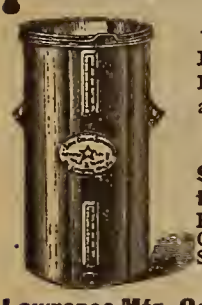

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Rapid, Clean and Satisfactory work guaranteed.
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The worst possible spavin can be cured in 45 minutes. Ringbones, Curbs and Splints just as quick. Not painful and never has failed. Detailed information about this new method sent free to horse owners.
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GOOD SWEET MILK

—the kind that makes fine flavored butter, rich velvety cream and wholesome food, results from perfect aeration.
THE IDEAL MILK COOLER does it all. Takes out all odors of animal food, stabling and animal heat. Makes all sweet and pure. Every cow owner needs a cooler and aerator. Strong, simple, durable and easy to run. Write for circulars and prices.
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Good condition, used short time only; new threads and couplings; for Steam, Gas or Water; sizes from ½ to 12 inch diameter. Our price per foot on ¾ inch is 3c; on 1 inch 3½c. Write for free catalogue No. 84.
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NO HUMBUG 8 PERFECT INSTRUMENTS in 1
Humane Swine V. Stock Marker and Calf Dehorner. Stops swine of all ages from rooting. Makes 48 different ear marks, all sizes, with same blade. Extracts Horns. Testimonials free. Price $1.50 or send $1 get it on trial; if it suits send balance. Pat'd Apr. 23, 1901.
FARMER BRIGHTON, Fairfield, Iowa.

Farmers' Sons Wanted—with knowledge of farm stock and fair education to work in an office; $60 a month with advancement; steady employment; must be honest and reliable. Branch offices of the association are being established in each state. Apply at once, giving full particulars. The Veterinary Science Ass'n. London, Canada.

Cash for REAL ESTATE no matter where it is. Send description and cash price and get my wonderfully successful plan. W. M. OSTRANDER, North American Bldg., Philadelphia, Pa.

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For sale, 8,000 acres of good Sugar-Beet land, in Arenac, Iosco, Ogemaw and Crawford counties, near railroad towns, etc. Terms easy. Write R. M. PIERCE, West Bay City, Mich., Agent, or J. W. CURTIS, Whitmore, Mich.

PATENTS Send sketch for free opinion. Fee dependent on success. Estab. 1864. MILO B. STEVENS & CO., Attys. Div. B, 11th & G Sts., Washington, D.C.

Live Stock and Dairy

FEEDING BY THE SCALES

The stockman and feeder who knows definitely when the limit for profit has been reached without the aid of scales when finishing stock for market is a rarity. Even the most expert in estimates will often find himself deceived with unusual animals when the scales are consulted. The most prevalent mistake made by haphazard feeders, and one that results in tremendous losses throughout the country, is that of marketing stock a few weeks too soon—just before they are properly finished and are actually making the heaviest gain at least cost.

The average feeder who depends on his eyes and sense of feeling to estimate the condition of finish and continuance of gain in his animals often fails to take into account all the true facts in the case, and does not realize how much more surface the well-rounded, nearly finished animal has on which to distribute his accumulating flesh and fat than in the earlier period of feeding, when each day's improvement was easily seen.

Another very prevalent mistake in this connection is with stock being fed in the spring season that is intended to be finished on pasture. With the approach of warm weather all stock is inclined to get partially off their feed, caused by their natural pining for range and new, fresh feed, the scent of which comes to them so temptingly. At such times the inexperienced or unthoughtful feeder will imagine his stock to be making no gain, or falling away even, and in the fear that his feed is being wasted will rush his stock onto the market unfinished, and consequently at an inferior price.

Had regular scale tests been made there would often have been shown a steady, if somewhat decreased, gain, despite the gaunt and deceptive appearance of the stock. A little reckoning at that time would have proved to the feeder that the rapid gain and additional price when fully finished on grass would well reward him for the few additional weeks of feeding and care given. B. F. W. T.

MILK-FEVER CURES

Every little while we see published certain cures for the terrible disease in cows known as milk-fever. The loss from this source is no doubt heavy, and it is worth while to do all in our power to check its ravages.

But may it not be possible that here, as in so many other instances, the traditional "ounce of prevention" may be worth the pound of cure? It seems to me so. It has been my practice since coming on the farm to follow the following plan with cows due to come fresh in the spring of the year, as well as in early summer: Three or four weeks before the cow is due to give milk all heavy grain is taken away from her. In the place of this the very best of hay is given to the cows, and in other ways care is increased until the critical period comes on. The same day the calf is born a ration of two quarts of bran is given, well mixed with warm water or the first milk taken from the cow. This assists in a most important way in clearing up the system of the cow. For two days the cow is not allowed to drink cold water. It is something of a chore to warm and carry water to a herd of cows in this way, but it will pay. Before letting the cow out to drink with the rest I give her a pail of the warmed water, thus partially quenching her thirst before she goes to the cold water.

Now I gradually begin to put the cow back on her ration of meal, keeping up in the meanwhile the bran, until at last I have her taking her accustomed quantity of the heavier feed. In this way I have succeeded in removing all danger of milk-fever, and have not had a case in thirteen years. Sometimes it is well to milk the cow out before she begins to give milk regularly. This removes any possible danger of ptomaine-poisoning.

One of the best cows I know of—a splendid, large and healthy animal belonging to a neighbor—a little while ago died from overdrinking at a cold stream the day after she had her calf. I believe many cases of milk-fever may be traced to the chill following taking so much cold water before the cow should have it. No doubt a dose of salts or saltpeter, given a few days before the cow is due, is another grain of prevention. And is it not much better to think of these things beforehand than to regret that we did not when it is too late? E. L. Vincent.

THE VALUE OF HOG-WALLOWS

The hog is a native of hot climates, where his thick skin served as a protection against poisonous snakes and other enemies. In the state of his present higher civilization his thick skin is in some respects a detriment to his best welfare. When closely confined in filthy quarters it provides a harboring-place for mites and vermin, from which they are with difficulty dislodged. The extreme thickness of his skin also tends to retain the body heat too closely when penned up in hot weather, out of reach of his natural protective element—a moist mud-bath. The hog that is free to find it well knows how to escape from insect-enemies; or if overheated, into a wallow-hole, where he will plaster his entire body in an armor of mud, which when peeled off cleans and invigorates his skin.

The hog is not so filthy an animal as he is represented. If there are clean natural or artificial wallows within reach he will select such in which to take his wallow bath in preference to filthy holes containing yard-drainings which he, perforce, often has to make use of. Where natural running streams cannot be made use of it will be found a profitable investment to provide artificial wallows made of plank, so constructed as to slope gradually to a depth sufficient for the largest hog to thoroughly plaster himself with the mud and water supplied.

The wallow-box should be built so it can be conveniently cleaned and refilled with fresh water and dirt. Especially is such a wallow beneficial where hogs are kept in large or considerable numbers and kept rung, and therefore less able to provide their own wallows.

Where such wallows are provided they will often save the lives of many valuable animals and help ward off disease, besides contributing in no small degree to the health and thrift of the herd. Brood-sows farrowing during hot weather are especially benefited by access to clean, well-adapted wallows. By such means they will keep in check the danger from overheating and fevering of their blood, which often proves fatal to both the sows and their litters.

The hog furnished with plenty of room and given a chance to select his natural environment soon becomes healthy, happy and wise. B. F. W. T.

STEADY IN THE SHEEPFOLD

Now is a good time to hold on firmly to the sheep. Not every one is going to believe this. A great many, discouraged by the low price of wool for a year or two, will drop out of sheep entirely, and the pendulum will swing away to the other side. That is the universal law governing such matters. Then dairying will be overdone, and the drift will be back to sheep again.

Now, I believe a steady hand at the helm is best. The really successful farmer is the one who takes an even course one year with another and lets the pendulum swing as it will—that is, he keeps as many sheep as he can conveniently manage, the same proportion of cows, about the same acreage of corn, potatoes and other crops, and keeps on in the even tenor of his ways. If sheep plunge up or down he is safe; he will not be broken if the price drops out, nor will he expect to get rich in any one year if figures boom.

It is not very likely that we shall see wool-prices back where they once were in a good many years. Conditions are against that; but there will always be a fair margin of profit in wool, while mutton will bring the real profits of sheep-growing. And by the way, is it not a good rule to let wool and everything else we have on the farm to sell go when prices are fair? Here is what I mean: I know of men who two years ago could have taken twenty-three cents a pound for their unwashed wool; but no, they were going to have twenty-five. The result was they have their wool on hand to-day, with a prospect of being compelled to take perhaps less than twenty cents a pound for it. Once in a great while one makes a hit by holding his wool in such a way as that, but not very often. It seems to me now that he is a wise and sensible man who does not stand for a cent or two a pound when the price offered is fair. The chances are against his ever doing better by holding. E. L. Vincent.

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Our automobile tires are just as safe, satisfactory and reliable.
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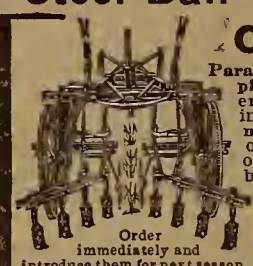
The REID Hand Separator

is the closest skimmer, as well as the easiest running and most economical separator made.
Very Simple and Durable. Capacity 150 to 500 lbs per hour. Prices $60 to $100. Hand separator circular and illustrated catalogue of dairy supplies free
Sent anywhere on 10 Days' Free Trial
A. H. REID
30th and Market St. Philadelphia, Pa.

HENCH'S 20th Century Steel Ball Coupling Cultivator



Parallel beam movement, pivoted axle, with lateral beam movement in connection with the movable spindles, or either independent of each other. Lateral beam movement operated also by hand lever. Centre lever for spreading and closing shovel gangs. The most complete cultivator on the market, having every possible movement of the shovel gangs.
Order immediately and introduce them for next season.
The HENCH & DROMGOLD CO. Mfrs, York, Pa.

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The "Philadelphia"
The only Perfect Continuous open-front Silo made. See open-top Patent Roof. Ask for catalogue.
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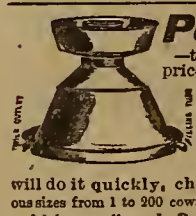
Also made in the West by the DUPLEX MFG. CO., South Superior, Wisconsin.



Perfect Butter
—the kind which brings the highest price in any market can only be made from perfect milk. All bad odors and flavors of animal, feed or stable must be removed,
THE PERFECTION Milk Cooler and Aerator
will do it quickly, cheaply and perfectly. Made in various sizes from 1 to 200 cows. Send for prices and catalogue of Farm and dairy supplies. L. R. Lewis, Mfr., Box 19, Cortland, N.Y.

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is not like others—it is better. It is Fire, Wind and Water-Proof, being a perfect roof in every way and at the same time has the advantage of being low in price. Fits the steepest or flattest roofs. Anybody can lay it. A knife and hammer are all the tools necessary. Saves you money on either new or old roofing. Sample and Circulars free.
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$1,500.00 Cash Given Away

Can you count? Then you can enter the great Dot Contest described on Pages 18 and 19 of this issue of the Farm and Fireside. Cash prizes to the amount of $1,500.00 given absolutely free.

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AT ACTUAL COST OF WIRE
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With 4-Inch Tire Steel Wheels
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And Family Almanac for 1902. 160 pages 120 engravings; the finest work of its kind ever published. Gives recipes for making condition powders; remedies for all diseases of fowls; plans and diagrams for building poultry houses; tells you how to raise chickens profitably; gives description with illustrations of 48 leading varieties of pure bred fowls; also

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and poultry supplies at lowest prices. It is an encyclopedia of chicken information, worth many times its cost to anyone interested in poultry. You positively cannot afford to be without it. Sent postpaid, on receipt of price, 15 cents. Address,

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DEATH to LICE on hens & chickens. 64-p. Book Free. D. J. Lambert, Box 303, Apponaug, R.I.

Free for the Asking

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Scores of articles for household and personal use are described in our new Premium List, which is now ready for distribution. All of these may be had for but a little effort. Send for the Premium List and get the full particulars. It will interest you. Write to-day. A postal-card will do. The List is sent Free.

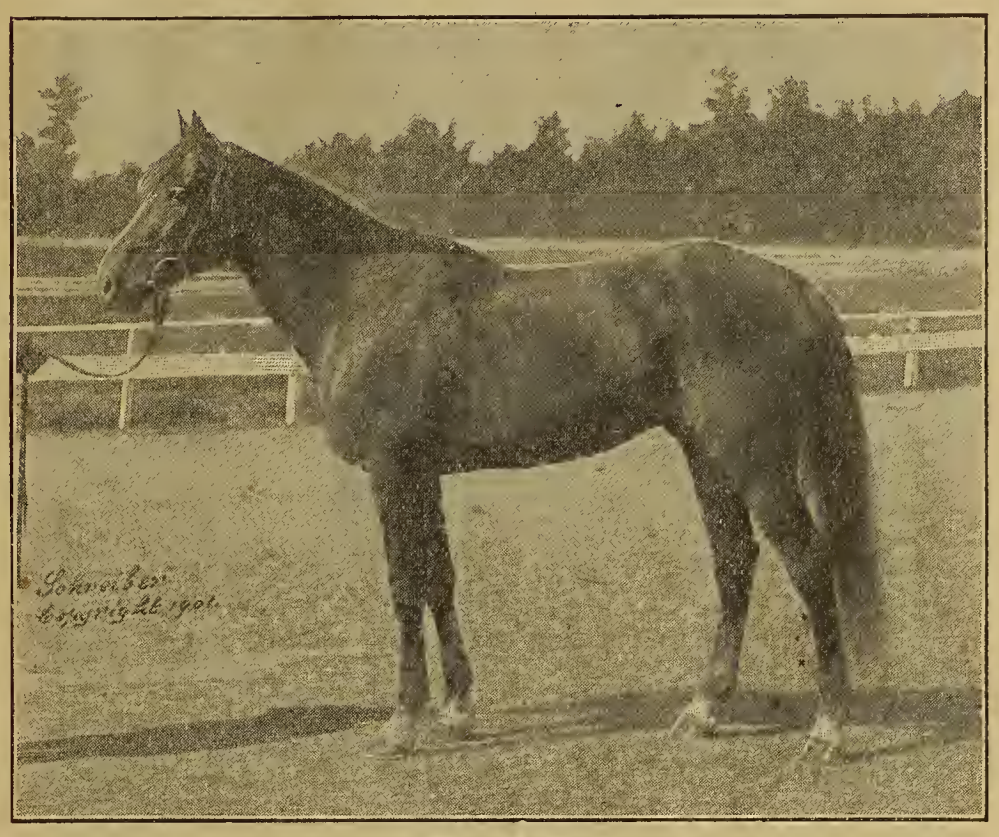
FARM AND FIRESIDE
Springfield, Ohio

Live Stock and Dairy

CRESCEUS, KING OF TROTTERS

Last season, from July to January, in a tour over the country, from the Great Lakes to the Gulf, and from the Atlantic to the Rockies, the chestnut stallion Cresceus became the champion trotter and the most wonderful turf performer of all time. Twenty-two times he started against time or other horses, and broke twenty-three world's, state and track records. In records broken, races won and money earned—over seventy-two thousand dollars—in a single campaign he has surpassed all other champions of the turf, trotters, pacers and runners.

At Columbus, Ohio, he made his mark against time of 2:02¼. At Brighton Beach he defeated The Abbot, the former record-holder, and made a new race record of 2:03¼.



CRESCEUS—TIME, 2:02 1-4

That the one man, Mr. George H. Ketcham, of Toledo, Ohio, is the breeder, trainer, driver and owner of Cresceus, and also the owner of his sire, Robert McGregor, and his dam, Dorothy's Mabel, is a record as remarkable in the annals of the race-course as the achievements of the horse.

MILK-FLOUR IN SWEDEN

Robert S. S. Bergh, Counsel at Gothenburg, Sweden, in an article in *The Sanitarian* of April 11, 1902, says that Dr. M. Ekenberg, of Gothenburg, has made a discovery which will be of importance in dairy-farming. He claims to have invented an apparatus by which milk can be brought into the form of powder, like flour in appearance, but possessing all the qualities of milk in concentrated form, moisture excepted. It is said that this milk-flour is completely soluble in water, and can be used for all purposes for which common milk is employed.

The milk-flour does not get sour, does not ferment, and in the dry state is not sensitive to change in the weather. It can be kept and transported in tin cans, barrels or bags. The cost of production Doctor Ekenberg has estimated at about twenty-seven cents for one hundred and six quarts, and he thinks that flour made from skimmed milk can be sold for about thirteen cents a pound. At a recent meeting of the Academy of Agriculture Doctor Ekenberg exhibited samples of the milk-flour, which received favorable comment. It is considered that the invention will be of the greatest importance for the utilization of skimmed milk which heretofore has largely been wasted, but in the dry form can be transported all over the country without losing any of its original good qualities.

SWELLED FORE LEG.—V. A. N., Nace, Va. I have not the least doubt that the swelling of the fore leg, and particularly of the knee, of your young mule was caused solely by your bathing the leg with liniments. If you will cease to make these applications and give your mule some gentle exercise every day the swelling will soon disappear, unless it be that your liniment is very acrid and caused considerable and deep-seated inflammation in the subcutaneous tissues.

STUNTED HOGS.—A. D., Beacon, Iowa. That your hogs do not grow, seem to grow smaller and eat more than they ought to may be the result of various abnormal and even morbid processes, but such an unthriftiness does neither indicate nor exclude the presence of any definite or specific disease, and only shows that either the power of digestion or assimilation has been seriously impaired. This is often done by the presence of large numbers of intestinal worms and various other causes.

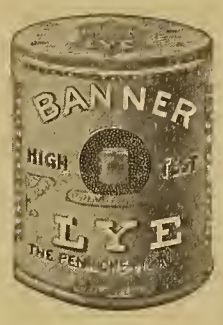
COUGHING PIGS.—W. J. C., Caledonia, Minn. Coughing is an attending symptom of nearly all respiratory disorders, consequently upon it alone no definite diagnosis can be based. It is most likely that your pigs are suffering from lung-worms in the ramifications of the bronchi in the lungs. These worms cannot be reached by any medicines, and to endeavor to expel them by compelling the pigs to inhale smoke or noxious vapors, as some have recommended, is surely much more injurious to the pigs than to the worms. Pigs that harbor comparatively few of these worms and also those that succeed in coughing them up will recover, while all others will die.

WARTS.—D. L. R., Sulphur Springs, Texas. If what you describe and call warts are warts, it will not be so very difficult to remove them by repeated and judiciously made applications of nitric acid somewhat diluted (see article on warts in the FARM AND FIRESIDE of June 1st, 1901). But since, according to your statements, the warts are densely crowded together, and within two years have spread over a space of eight inches by fourteen inches on your cow's back, it is very doubtful whether or not destroying them by forcible means will do any good, because in the first place the skin-tissue may already be degenerated to such an extent that a restoration to a normal condition is out of the question; and even if it is not there is great danger, since the warts are so closely crowded together that an application of nitric acid or of anything else that will destroy warts, unless made very judiciously and with great care, will also destroy the remaining normal skin that may yet exist. Therefore, since lost or destroyed skin cannot be reproduced again, a large, never-healing sore of eight inches by fourteen inches might be produced, which in your latitude would immediately be converted into a mass of corruption by flies and maggots. It may, therefore, be best that you leave the warts alone and ward off everything that may irritate them or cause them to bleed (if the blood of a wart comes in contact with any sore or lesion, even if ever so small, it is apt to produce new warts), for then there will be hope that in time they may yet disappear without any treatment. To anoint them occasionally with a little oil may do no harm.

Soap-Making with Banner Lye

One can of *Banner Lye* (it is not old-style lye) costs but a few cents and will make ten pounds of purest hard soap or twenty gallons of best soft soap. No boiling; no waste; no large vessels; almost no trouble. Takes only ten minutes.

Clean Kitchens Milk-Rooms and Dairies



A little *Banner Lye*, a little work and some water will make your back rooms as clean as the parlor.

Milk-pails and pans shine; butter-tubs, milk-bottles, butter-jars as clean as a whistle.

Very little expense and labor go a great way with *Banner Lye*. Full directions for its many uses on each can.

At your grocer's or druggist's. If you can't get it, send for book, and tell us who your grocer or druggist is.

The Penn Chemical Works, Philadelphia, U. S. A.

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Lice, Fleas, Ticks, Chiggers, Every Form of Parasite

on Cattle, Horses and Dogs. Cures Mange and all skin affections, leaving the Coat sleek and glossy. It is odorless and harmless to man or beast.

HIGHLY RECOMMENDED by well-known farmers and stock owners.

FREE Send us your name and address with 2c stamp for postage and we will send you a sample free.

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EVERY YEAR OF USE
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A marvelous, new invention, three times as fast and easy as any other egg-beater or cream-whip ever invented. At the same time it is so simple that it cannot possibly, by any chance, get out of order. Another point of greatest excellence is that it can be cleaned thoroughly in an instant, for there are no bearings or wheels in which the material to be beaten can collect. It operates simply and easily, and is the

MOST RAPID BEATER

or whip known. It does not require to be held hard against the bottom of the dish, thus running any risk of breaking glass or china. There are no parts about the beater that can break. It is made of the most durable material, and has no glass parts whatever. Sent by mail, prepaid. Order as No. 821.

We Will Send This Egg-Beater FREE for Sending Only TWO Yearly Subscriptions, New or Renewal, to the Farm and Fireside; or

We Will Send the Farm and Fireside One Year, New or Renewal, and This Egg-Beater for Only 40 Cents.

(When this offer is accepted no cash commission can be allowed, and the name cannot count in a club toward a premium)

ADDRESS
FARM AND FIRESIDE, Springfield, Ohio

CURRENT COMMENT

Mere education is not knowledge.

Change the line "Oh, to be nothing," into "Oh, to be something."

The most costly thing in the world is ignorance; the most valuable, knowledge.

The thoughts of the heart are engraved on the face. "How can a man be concealed! How can a man be concealed!"

The grange is doing more than any other agency to give the farmer a good social and financial standing. What other institution helps him in so practical a manner.

The shrewd man keeps eyes and ears open, and his mouth shut. "Man," said Socrates, "was given two ears, two eyes and one mouth, that he might see and hear twice as much as he speaks."

Be very sure your grange is dead before you bury it. Many a grange has suffered the agony of a premature burial. A grange is not dead so long as there is a breath of fraternity feeling in the community.

Deliver us from those teachers who speak half-truths, fearing the people will not understand the truth. Usually the people understand a deal more than the teacher gives them credit for. Half-truths blight, truth vitalizes.

Isn't it about time that we stop talking of the isolation and limitations of farm-life and speak of its wondrous beauty and compensation, its unlimited possibilities for the development of a symmetrical manhood and womanhood?

It is reported that some colleges contemplate doing away with the department of veterinary science, because farmers are unwilling to pay a fair price to veterinarians. When farmers so breed their stock as to have more money wrapped up in one animal, they cannot afford to do without the veterinary surgeon. Good stock is essential to fat pocketbooks.

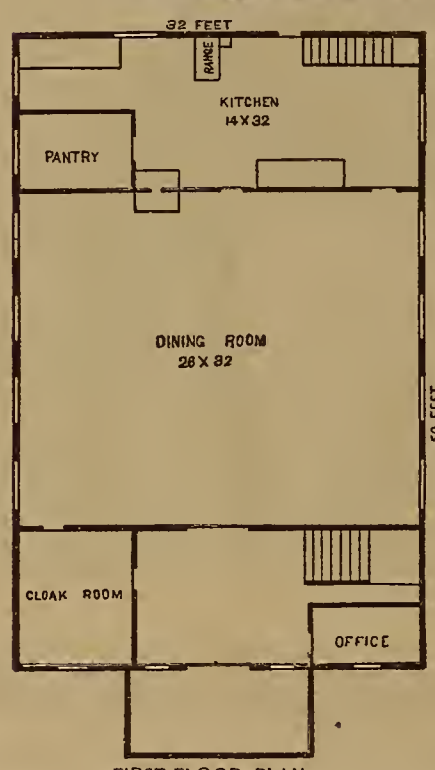
THE MAY TOPIC

"Of what advantage is a good education?"

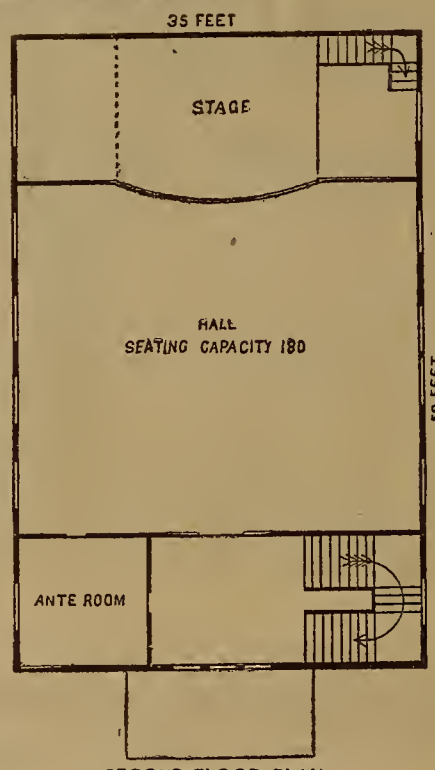
Supplementary Topic.—"What experiments is our station conducting, and what bulletins has it issued within a year."

The Grange

By MRS. MARY E. LEE



FIRST-FLOOR PLAN



SECOND-FLOOR PLAN

KICKEMUIT GRANGE HALL

We are indebted to L. Maker for the photograph, plans and description of Kickemuit Grange Hall. Kickemuit Grange Patrons of Husbandry, of East Warren, Rhode Island, has recently dedicated its new hall. It is a fine structure, situated on a high hill overlooking the Kickemuit River and Mount Hope Bay.

The ground floor consists of a dining-room, kitchen, front hall, committee-room and ticket-office. From the lower hall a winding staircase leads up to the second floor. This floor consists of a large landing-area, audience-room and stage. The building is heated by hot air and lighted by electricity. It is convenient in every way.

Mr. Maker writes, "The walls are tinted in colors pleasing to the eye. There is a cellar under the whole building, which serves as a store-room for coal, lumber, furnace, etc. Our grange is a *live* grange. We had a very interesting meeting last night. The subject was, 'What is your favorite vegetable and what are its merits?' The potato won by seventeen majority. We generally have about forty members present at each meeting."

Grange Program.—Kickemuit has a most excellent printed program. The program itself is spicy and varied. Its make-up is artistic and dainty, and compares favorably with those sent out by clubs in the cities. And why not? Evidently Kickemuit Grange is composed of cultured people, who have a hundred chances for enjoyment and work, where a less cultured community has one. We'll warrant that besides having a high type of society that this locality has sent out lawyers, doctors, teachers and scientists to the rest of the world. Is it not so?

THE SCARCITY OF HIRED HELP

The continued scarcity of hired help is not an unmixed evil. The inevitable result must be machinery indoors and out; better business principles will be applied; greater attention given to that which is of most worth, useless and unprofitable work dispensed with. When stern necessity compels one to rest from labor awhile, he will find that there is a deal of unprofitable and awkward work done indoors and out, and that many hours have been given to toil that might better have been used in devising ways to accomplish the same end with less work.

Tact clinches the bargain,
Sails out of the bay;
Gets the vote of the senate
Spite of Webster and Clay.
—Emerson.

Poultry-Raising

By P. H. JACOBS

COMB INDICATIONS

When the comb seems bloodless, light-colored and limp the fowl is anemic. On the contrary, when the comb is dark-colored, purple and bright it is the opposite—plethora. Between these two extremes there will be found in perfect birds a comb with a plump look and healthy color. The appearance of the wattles and ear-lobes will confirm the opinion as formed from the comb. Changes in the comb are nearly all due to some disturbance or disease in some part of the body.

POULTRY-HOUSES

Construct your houses not too large, as you will be tempted to keep too many fowls together. Have them with windows so placed that the fowls may enjoy the sunlight, perfectly tight, except means for ample ventilation, and without a possibility of a direct draft reaching the fowls at night after going to roost. A fowl will take cold while asleep under certain circumstances as easily as will a person. Keep the roosting-apartments clean and sweet by frequent cleaning.

BUY THE BEST

When buying pure-bred fowls do not seek "culls," but endeavor to secure those that are good. A "cull" may have some fault—may be lacking in hardiness or may have been tried with unsatisfactory results. It will always be an advantage to visit the breeder and make a selection rather than order by mail, unless the breeder is known as one who is reliable and whose stock is first class. Sometimes, however, a "cull" is simply not a show-bird; in which case it may be equal to any in the flock in other respects.

FEATHER-PULLING

Feather-pulling destroys a flock. When a cock begins to look as if he were picked on the neck and breast you may then begin to watch for the hen that is doing the mischief; and she should be removed at once, as she will teach the habit to others if she remains with the flock. Feather-pulling is a vice that comes from confinement and idleness. There is no remedy for it, but it may be prevented by so feeding the fowls that they will be compelled to scratch. They should be fed meat and bone-meal, plenty of grass, and a little salt in their food.

LEGHORNS

Leghorns are excellent foragers. There are several varieties, which embrace nearly all known colors. Besides the White we have the Brown, Buff, Black, the Cuckoo, Duckwing, Pile and the Mottle. The White, Brown, Black and Buff are the most popular. Leghorns belong to the class known as non-sitters—that is, they rarely show any inclination to sit. This class always comprises excellent layers, while other breeds (the sitters) are those which make the best general-purpose fowl—good upon the table and at the same time excellent layers.

BROWN EGGS

The color of the shells of eggs is not very important so far as quality is concerned, but in some markets there is a demand for brown eggs. It is considered in actual practice by some that fowls which lay brown eggs are as egg-layers usually more valuable to poultry-keepers, for somehow or other a brown egg is regarded as more attractive when on the table; and as "taste" goes for something in matters of this sort those exercising it (especially those that are willing to pay) may as well be humored. Langshans, Plymouth Rocks, Dark and Light Wyandottes and Cochins lay brown eggs. There is no uniformity, as some hens of the same breed lay darker eggs than others, and in all flocks there will be dark and light eggs produced.

SKIN DISEASES

Eruptions on the skin are caused or aggravated by too much stimulating food. Eruptions often appear on the wattles as eczema, and may be easily noticed there. First one will notice white points; then they grow larger, run together, burst and discharge a thin liquid, that dries, forming a crust. The sick bird has little appetite and moves about aimlessly. To the wattles and other parts having the eruption apply a zinc ointment. Feed plain food with cut clover or grass, giving the birds a good roomy house and ample run outside. The disease is not necessarily contagious.

DISEASE AND NEW STOCK

Disease is easily brought into a flock. Yards that have never known disease have suddenly been visited, and whole flocks die off by simply introducing a bird from elsewhere among those at home. Such a bird may be apparently well and show no signs of disease, yet it may have come from some place where disease had played havoc; and in being where the cholera or roup may have prevailed be itself free from contagion, yet carry it elsewhere—just as some persons are exempt from smallpox, though they may convey it in their clothing to others. In adding to the flock, therefore, you cannot be too careful in regard to where you procure your birds.

VALUE OF THE DROPPINGS

The manure from other than grain-fed hens in summer is usually less valuable than it is in winter, as they then feed mostly on grass, while in the winter they are given a greater variety. But it is none the less worth taking care of at all seasons. It will heat very rapidly in hot weather if kept in piles. As it is usually deficient in phosphates it is a good plan to mix some of the commercial phosphate with the manure while it is heating. It always contains enough sulphate of lime, or land-plaster, to absorb the ammonia, while the phosphate with the nitrogen, which the hen-manure abounds in, will make a fertilizer very nearly equal to some that is purchased.

ABOUT INCUBATORS

There are quite a number of incubators now on the market. The inquiry is sometimes made, "Which is the best?" It is impossible to give a satisfactory reply, as each has its distinctive features and merits. At the present day no incubator could long exist if not all that is required. They have been improved to the highest degree of efficiency. It is never too late to use incubators. Chicks are in demand the entire year, and a large number can be hatched at one time with an incubator. The hen is a valuable aid, as she lays the eggs, but she will not sit when her services in that line are desired. The incubator is always ready and does the work, whether of small or large size.

Overfeeding.—D. B., Clearlake, Iowa, writes: "My hens are lame, cannot stand up, roll over and appear giddy, but otherwise have red combs and good appetites." They have been greatly overfed and are apoplectic. Remove the male and diet the entire flock, allowing only one ounce of lean meat once a day for a week, forcing the hens to scratch for a small quantity of millet-seed.

Scaly Legs—Rye.—D. T., Westplains, Mo., writes: "Please give a remedy for scaly legs.——Is rye as good as wheat or corn for poultry?" Anoint with melted lard, two parts, crude petroleum, one part, and a small quantity of sulphur, well mixed, using it twice a week.——Rye is considered excellent in Europe, and is probably equal to the other grains, but should not be given exclusively.

Overfeeding Turkeys.—J. W. writes: "I lost a fine gobbler. He was very fat. I fed corn and occasionally a bran mash. A turkey-hen died from the same cause. I used all known remedies, but they died after being sick three weeks." It is impossible to assign a cause unless details are given. It is probably the case that the birds were overfed, which is at the foundation of nearly all diseases.

Way Down in Georgia

By SUSIE BOUCHELLE WIGHT

While the more advanced of their own race are uniting with philanthropic whites in discussing plans for their betterment; while their political status, their intellectual possibilities, and even the question of their possessing souls, are causing men to spend time and breath in a reckless manner, the rank and file of that vast multitude of negroes who are still untouched by the spirit of progress are keeping calmly on their way. It is altogether likely that vague longings for better conditions stir their humble breasts at times, but in their simplicity they do not allow these indefinable hopes and dreams to disturb them. The past does not clog them with vain regrets; the future is still the future, but the present is their own, and according to their ideals they make the most of it. There is only one Booker T. Washington, but he has many co-laborers like-minded unto himself, and these men are commanding the respect and admiration of the whole thinking world by the intrepid courage with which they undertake the uplifting of that portion of their race scattered so thickly through our Southern states, and though nominally free, still in thrall to ignorance and superstition. Perhaps these unselfish men will not live to see the full fruition of their labors, but one who knows the people with the intelligence of lifelong acquaintance can acknowledge that even now we are in the dawn of what must be a great day for them. The signs are infallible. Ill-taught schools in log huts by the wayside are giving place to well-equipped institutions, and it is a fact that negro parents will make more sacrifices to send their children to school than will the poorer white people. They are also beginning to take more interest in their homes, and the beauty instinct shows in many crude and simple attempts toward adorning the cabins, and in the flowers which blossom about their lowly doorways. Their churches stand as monuments to the reverent pride of these people, who out of their own poverty give gladly toward the building of their houses of worship, and who will "pay de preacher" though they may see the bottom of the meal-barrel and meat be an unknown quantity.

Education and earnest and systematic missionary effort are leavening influences which must surely be felt, and will in time quite settle the mooted negro question. Just so long as evil is upon the earth there will be bad negroes—the millennium is not coming to one race sooner than to another—but the possibilities which the future holds for these dark-skinned strangers within our gates are not limited to any man's conceptions or beliefs. As brain-workers they can never be great, but the brawn of the masses when trained in industrial schools will stand them and their country in good stead, and there will not likely be any scarcity of men among them to act as capable leaders for others.

It is not of that far future, however, that we would speak of in this article, but of some of their attributes to-day; for with all their faults we love them still. They try us with their carelessness and unreliability; they shock us with their slovenliness, and we sometimes make pointed remarks about the doctrine of depravity, but the fact remains that the most satisfactory servants in Southern households are the one-time slaves and their descendants, and we find much that is attractive and interesting in them, untrained though they are. Those of them who have taken advantage of the opportunities the new movement affords do great credit to themselves and their teachers in their neatness, their quietness and capability, whether as domestic servants or whether they have elected to spend their lives in passing on to a younger generation the doctrines of cleanliness, studiousness and sobriety of life and conduct. Gradually these educated ones lose many of their racial characteristics, improving them certainly, but it must be confessed that we turn away from them without a sigh to contemplate with smiling forbearance the peculiarities of the "real-sure-enough nigger," light-hearted and happy-go-lucky.

Booker T. Washington once said most pertinently, "They will call us Doctor or Colonel or Bishop, but they will not call us Mister, and it is the Mister we want!" Whatever may be the defection of the white people in this respect, they surely cannot complain of each other; and to ears long accustomed to hear Tom, Jerry or Scip addressed without further ceremony it comes with something of a shock when one sable-hued tatterdemalion receives this handle to his name from another of his ilk. When the time comes, as it surely will some day, that we can say Mister without swallowing hard, it will be the best of signs that their proven worth has won recognition and appreciation. They are scrupulous also to speak of each other as gentleman and lady. Once upon a time a knock at the back door sent a friend of mine to answer the summons of a great fat negress, who asked, in a tone of studied repose, "Is you de white 'oman what wants to git a lady to cook fo' her?"

"De white 'oman" had feelings too deep for utterance, but she meekly acknowledged her identity, and because she was so sorely in need of a servant she installed the "lady" in her kitchen, though with much trepidation. The lady's reign lasted for many days. She sat flat on the floor when it became necessary to replenish the fire, she smoked a pervasive pipe, and she had a distressing way of leaving her shoes about in rather conspicuous places. She was more comfortable without them, and on cold days she would warm her stockinged feet in the stove-oven. But one's mind need not be allowed to dwell on trifles like these when her cooking was a marvel of perfection. She was what we call a "born cook," for she had never seen an industrial school, nor had she the kitchen-training of the sumptuous ante-bellum days. As a rule negroes are excellent cooks.

A BAPTIZING

As nurses from their youth even down to old age they are wonders. A fretful, restless child may keep his mother taxed to her limit all day long, but a little black nurse can set him down with some small trumpery of sticks and string, and sitting down beside him, with her limbs stretched straight out before her, she may devote herself calmly to her blue-backed speller or "practise writin'" for hours at a time. As a playmate she is the most charming, and all children love to frolic with these little brothers and sisters in black—a feeling inherited from the old régime, when the young of the two races mingled fearlessly and happily together in sport.

If one is inclined to imagine that a thoroughly democratic spirit prevails among the masses one is very much mistaken. There are dusky autocrats of the kitchen and frisky young aristocrats of the broom and duster, or of the nursery, who look with ineffable scorn on the field-hands, although they may be quite on a par with them so far as morals and education or the lack of both may go. The outdoor laborers, on the other hand, speak most disparagingly of domestic service, and make remarks about certain people who, like the turtle, carry all their possessions on their backs. They aver that in the fields their work lies straight before them, and they know when it is complete; but in the house they work all day long, and cannot see what they have accomplished, recalling the old couplet about that work which lasts from sun to sun, and that which is never done.

A COTTON-PICKING SCENE

Many customs and characteristics, however, are peculiar to both of these self-divided classes. They all dance and sing. Their men hunt possums, and love and cherish their yellow dogs. They all observe Emancipation Day, and the sounds of their church-bells are beloved by all degrees. While they may fight and squabble among themselves, and flourish their razors incontinently, they make common cause against "po' white trash" who attempt to play peacemaker.

With one accord they denounce the time-worn joke about watermelons and spring chickens as in the poorest taste. While a white person usually causes a great commotion in the hen-roosts at night, I have seen a gentleman of color catch one after another with neatness and dispatch in solemn quiet; but he did not appreciate my admiring comments on his dexterity. A knowing look overspreads their features at any mention of "Bre'r Rabbit" and "Bre'r B'ar," but they always protest utter ignorance of their folk-tales, and I have never seen one who would own up to knowing how to dance. They are amenable to gentle persuasion, however, and a gleam and chink of silver coins will cause them to show forth saltatory performances which make modern cake-walks seem flat, stale and unprofitable. There is "De Possum La," "De Merinctum," and they "Cut de Buck," and "De Holy Man"—the latter to a rather irrelevant monotone song which runs as follows:

"Willy, Willy, Willy,
In de long-tailed coat,
Makes me tink
Of a ole billy-goat," etc.

Emancipation Day is the red-letter day of all the year, and is invariably spoken of as the "Twentieth," and no Southern person ever needs to ask them to designate the month, for certain facts impress it on our minds. No self-respecting colored laborer is going to work on that day, and industries all come to a standstill. We observe the day whether we want to or not, for we have to put our own hands to the wheel of household machinery, while a great dark concourse pours out upon the highways, clad in a gorgeousness which would have caused Solomon to shine in diminished splendor in the midst of all his glory. They dash past in hired buggies and carriages or plod along behind patient oxen, while many fare forth on foot, carefully screening themselves under umbrellas as they are accustomed to do on Sundays, though on week-days in the fields the sun beats hotly down on them quite unheeded. No individual is too poor to provide a generous lunch for the occasion, and there is great rivalry as to who shall excel in quality and quantity.

They celebrate the day variously by railroad excursions or picnics near some neighboring lake or stream, sometimes having speeches at other exercises, but more usually mingling together in friendly social enjoyment.

The religion of these untutored ones seems to us an inexplicable mixture of superstition and an undefined reverence for a power far above and beyond them, and one sometimes feels that it is rather too much confined to their meeting-houses and their times of assembling themselves together for worship; but we cannot estimate what it means to them nor what they would be without its influence.

It is very emotional in its demonstrations; but one cannot laugh at the grotesqueness of their shoutings, their holy dances and their trances when we know what creatures of emotion they are—swayed for good or evil by their loves and hates, and how lately removed from their wild orgies of idolatry in Africa.

Their longing for something material and tangible in their worship is shown in a pretty incident which occurred in a small Southern town. They had bought a fine new bell for their church by what self-denial and offerings of mites one can never guess. Before it was placed in the belfry they went through the ceremony of christening it, marching past in reverent silence, and each one pouring on a little water, "jes like," said one of them to me, "we was a-shakin' hands wid it. And now when "Sister True and Faithful" rings out the call to prayer and praise there is a sweet answering echo in each simple, loving heart, for it is the voice of a dear friend.

The cotton-fields lay white as driven snow,
And wheat was draped in flowing cloth of gold,
While, wet with dew upon its blades of green,
The springing grass lay nestled in between,
O'erlooked by pines that, like the bards of old,
Sang rude, sweet music to the earth below.

And at the pine-tree's feet the shining sand,
By Southern river sparkling in the sun,
Basked in the warm and perfumed tropic breath,
Till, ushered in past twilight's shadowed death,
The glad gray stars came twinkling one by one,
And watched like sentinels o'er Dixie's land.

—From McGaffey's Dixie.

Bright's Disease and Diabetes Cured

Under the Auspices of the Cincinnati Evening Post Five Test Cases Were Selected and Treated Publicly by Dr. Irvine K. Mott Free of Charge

University Chemist Acting as Referee

Irvine K. Mott, M.D., of Cincinnati, Ohio, well and favorably known in that city as a learned physician—a graduate of the Cincinnati Pulte Medical College, and of the London (Eug.) Hospitals, has discovered a remedy to successfully treat Bright's Disease, Diabetes, and other kidney troubles, either in their first, intermediate or last stages. Dr. Mott says: "My method arrests the disease, even though it has destroyed most of the kidneys, and preserves intact that portion not yet destroyed. The medicines I use neutralize the poisons that form a toxine that destroy the cells iu the tubes in the kidneys."

The *Evening Post*, one of the leading daily papers of Cincinnati, Ohio, hearing of Dr. Mott's success, asked if he would be willing to give a public test to demonstrate his faith in his treatment and prove its merits by treating five persons suffering from Bright's Disease and Diabetes, free of charge, the *Post* to select the cases, and examinations to be made in the medical department of one of the most prominent universities in the United States.

Dr. Mott accepted the conditions, and twelve persons were selected. After a most critical chemical analysis and microscopic examination had been made in the university laboratory five out of the twelve were decided upon, the Professor making the examination remarking, "I should say they are all fatal cases." These cases were placed under Dr. Mott's care and reports published each week in the *Post*. In three months all were discharged by Dr. Mott as cured, the final examination being made at the university. The persons treated regained their normal weight, strength and appetite, and were able to resume their usual work.

Any one desiring to read the details of this public test can obtain copies of the paper by writing to Dr. Mott for them.

This public demonstration gave Dr. Mott an international reputatiou that has brought him into correspondence with people all over the world, and several noted Europeans are numbered among those who have taken his treatment and been cured, as treatmeut can be administered effectively by mail.

The Doctor will correspond with those who are suffering with Bright's Disease, Diabetes or any kidney trouble whatever, and will be pleased to give his expert opinion free to those who will send him a description of their symptoms. An essay which the Doctor has prepared about kidney troubles and describing his new method of treatment will also be mailed by him. Correspondence for this purpose should be addressed to IRVINE K. MOTT, M.D., 117 Mitchell Building, Cincinnati, Ohio.

"Experiences of Pa"

If you have read—most everybody has—"The Ghost of the Glacier" you will be interested in knowing that

ANOTHER GOOD STORY

by the same author has just been issued by the Passenger Department of the Lackawanna Railroad. It is called the "Experiences of Pa." It has the "story-telling" quality, and possesses, beside real humor, the charm of one of the daintiest love-stories that has been written iu a long time. The stories are contained in a little book, called "Lakes and Mountains," which will be mailed on request accompanied by 5 cents in postage-stamps to

T. W. LEE
General Passenger Agent, New York City

$1,500.00 Cash for counting dots

See Pages 18 and 19 of this issue of the Farm and Fireside. YOU can enter this contest. 207 cash prizes.

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If afflicted with weak eyes, use **Thompson's Eye Water**

Around the Fireside

SONG OF THE BROOK

BY SARA E. GRAVES

I come from the hills in whispering rills,
  Down from the woodland shadows;
With joyous song the summer long
  I revel in sun-filled meadows.

Dancing and gay on the rugged way,
  Over stones and boulders leaping;
Solemn and still toward the busy mill
  Through thrifty valleys creeping.

Full to the brim from the mountain's rim
  In the springtime floods I'm rushing;
Through the lazy marsh and sedges harsh
  A toilsome path I'm pushing.

In the forest dark the tall ferns hark
  To my tender, constant wooing;
While the daisies rank on the sandy bank
  Flirt to their own undoing.

The forest wings—bright, beautiful things—
  In my shallows dip and dabble;
But in hiding cool of the still, deep pool
  The fishes elude my babble.

I'm a happy brook with curve and crook
  And long and sunny reaches;
Silver cascades in the dingle shades,
  And tiny, pebbled beaches.

Oh, give me a life with beauty rife
  No law my course to measure!
A poet's dream is the wanton stream,
  And he may share its treasure!

THE DWARF TREES OF JAPAN

There are fads and fashions even in trees and flowers, and to-day Japanese floriculture leads the world. The Japanese have always loved their little dwarf trees, and the admiration of fashionable people from England and America has not materially altered Japanese ideals. For hundreds of years the dwarf trees of Japan have been held in the highest esteem by the Japanese, but it is only within the last twenty years that the people of England and America have become interested in these strange little trees.

Before that we thought that a lacquered tray or a piece or two of Japanese pottery were sufficient to show our interest in far-off Japan, but with the new line of steamships between our country and Japan so many Americans are to be found who have traveled in Japan that we are beginning to understand and appreciate the Japanese character, and also to have some idea of art as understood by the Japanese.

To be an artist in Japan means to be the creator of something beautiful. The potter who makes a vase whose colors glow and sparkle like living fire, and the painter who produces a picture whose lines are true, are artists, but not more artistic or held in higher esteem than the florist who produces a beautiful flower.

Beauty in miniature seems to be the highest form of Japanese art, and love of Nature is as truly a part of the Japanese character as the love of life; therefore, if a work of art be also a work of Nature it is the more highly esteemed, so the dwarf trees, which are the product of Nature and the highest skill in floriculture combined, are more admired than anything else in the country.

There are dwarf trees in Japan which are hundreds of years old, and have been handed down from father to son much as an Englishman hands down family pictures and plate. Trees that have been the property of noblemen seem to be particularly sought after by rich American and English travelers, and are sometimes sold for thousands of dollars. The Japanese people are enterprising as well as artistic; since rich foreigners have shown such a fondness for the dwarf trees agents have been sent out to every part of Japan to collect the little dwarfs and send them to England and America, where they are sold for astonishingly high prices.

DWARF PLUM, FIFTY YEARS OLD

A year ago a fine collection was sent to London. Of course, they were sent in the care of expert foresters or florists, for it is very important that the little trees become properly acclimatized, otherwise there is sure to be disappointment. The London sale was a great success, and all the dwarf trees were sold, some even going to a Russian palace on the Neva. Six weeks later a sale occurred in New York City. All the trees were sold, but the prices brought were not so good as those at the London sale.

The little dwarf trees of Japan are just as interesting as ever, but they are no longer the curiosity that they once were, for Japanese enterprise has sent them to almost every big city in the world. They will never be common because they are exceedingly difficult to raise; so closely have the Japanese guarded their secrets of dwarfing that only a Japanese can produce them, and not every Japanese by any means, for only a few families possess the secret, and the art of dwarfing is never taught to foreigners, but is handed down from father to son like other arts in Japan.

There is another reason why these little beauties will not become common—they cost too much. Few people of moderate means care to invest so much money in a single plant, even though it be ever so interesting. There are to be found in most of our large cities a few specimens of these curious little trees. They are in most cases the property of private individuals, so that they are not always easy to find.

H. P. Crabbe.

FAITHFULNESS

Perhaps the most majestic mountain of England is Helvellyn (El Velin, the hill of Veli or Baal), a long, beetling, looming height, towering up from the quiet valley of Saint John and the solitary shores of Thirlmere, dark, vast and imposing. It is a mountain that has won and held for itself a place both in religion and poetry. The Westmoreland shepherd dreads its scarred sides and windy heights; the tourist looks up at it in admiration and awe, and the mountain-climber is lured by the challenge of its skyward splendor.

PLUM, THIRTY YEARS OLD
Blossoms will not appear until the tree is more than twenty-five years old

An incident of a singularly pathetic nature is associated with this mountain. In the year 1805 Charles Gough was attempting to climb the steep ascent in the winter season, and losing his footing, fell, and died there alone and unfriended save for the faithful dog that always accompanied him on his rambles among the hills. It was three months before the body was discovered, and all that time the devoted dog kept watch over his master. How he survived and what he suffered in the long winter nights the poor animal alone knew. Whether he thought his master was asleep and expected him at any moment to awaken, or whether he knew that he was dead, the faithful creature kept his post until the searchers found them, the dead and the living, alone on the bleak mountain side.

In 1890 Canon Rawnsley and Miss Frances Power Cobbe erected a monument on the spot, with an appropriate inscription, which concludes with Wordsworth's lines "Fidelity," as follows:

This Dog had been, through three months' space,
A dweller in that savage place;
How nourished here through such long time
He knows who gave that love sublime,
And gave that strength of feeling great
Above all human estimate.

Sir Walter Scott commemorates the same incident in his poem, beginning:

I clim'd the dark brow of the mighty Helvellyn;
  Lakes and mountains beneath me gleam'd misty and wide;
All was still save by fits when the eagle was yelling,
  And starting around me the echoes replied.
On the right, Striden Edge round the Red Tarn was bending,
And Catchedicam its left verge was defending,
One huge nameless rock in the front was ascending,
  When I mark'd the sad spot where the wanderer had died.

Dark green was the spot 'mid the brown mountain heather,
  Where the Pilgrim of Nature lay stretched in decay,
Like the corpse of an outcast abandoned to weather,
  Till the mountain winds wasted the tenantless clay.
Nor yet quite deserted, though lonely extended,
For, faithful in death, his mute favorite attended,
The much-loved remains of her master defended,
  And chased the hill-fox and the raven away.

Through such examples of affection and faithfulness in animal life we feel the swelling of that tide of love that in humanity rises to such sublime acts of devotion and sacrifice—a tide that has its source in the eternal love and the eternal sacrifice.

John Wright Buckham.

GERMANY'S MEAT DECREE

In the light afforded by similar German regulations in the past it is reasonable to assume that the new decree forbidding the admission into Germany of imported meats to which borax or boric acid has been applied was designed to protect the German producers of meat rather than the health of the German consumer. This decree was signed by the Kaiser two days after he had dispatched his brother Henry on a friendly mission to this country. It will take effect on October 1st, and meat-packers say that it will cut off a direct export trade of six million dollars in American exports. Some assert that the trade thus to be affected really amounts to twenty millions, because large quantities of the products in question have in recent years been shipped to Germany by way of Holland, Belgium and England.

The use of small quanties of borax in the preparation of meats for export has not been regarded in this country as harmful. The British Local Government Board recently decided that it called for no restrictive regulations, and prominent authorities in Germany have declared that it is not injurious to the consumer. The decree is evidently a concession to the German agrarian protectionists.

Our own government, or that part of it which is called the Department of Agriculture, is getting ready to retaliate by excluding German products in the preparation of which borax is used. The German manufacturers of sausage, in Frankfort, admit that they use borax in the treatment of sausage for shipment to this country, and find it indispensable. The assertion is made that borax is used in beer and wines exported to the United States from Germany. Secretary Wilson has directed that a list be made of imports from Germany containing borax. "Imports of products in which borax is found," he says, "will be excluded."

But the President and Congress are yet to be heard from. We hope that it will not be found expedient to retaliate in any way; but retaliation should not rest upon an admission that we have erred in holding that the use of borax is not harmful. The President will not approve the exclusion of German products if we are to attempt to justify it only by admitting that the German authorities are right and our own are wrong, the truth being that our authorities still hold their opinion to the contrary.

S.

The Housewife

LOVE AND NATURE

Dear Love, when spring has come all Nature wakes,
And from her languid lids the bandage takes
To look with wondering eyes upon the world.
The trees unfold their robes of silvery green,
And thrifty insects from the blossoms glean;
Each birdling finds a mate both fond and true,
And I, dear Love, have you.

Dear Love, in summer-time each lengthened day
To harvest-fields a tribute rich must pay
Of sunshine packed in grains of yellow corn.
The earth is weighted with the season's store;
No creature, tree nor vine can ask for more,
Nature has satisfied each bird and bee,
Has given you to me.

Dear Love, chill fall doth paint in colors rare
The forests and the fields that soon grow bare
As Winter clasps them to her icy breast.
Nature must wake and work and rest awhile,
Must sleep and cry, perchance, as well as smile;
And Nature, Life and Love are one, I know,
Because I love you so.

—Anne C. Steele, in Harper's Bazar.

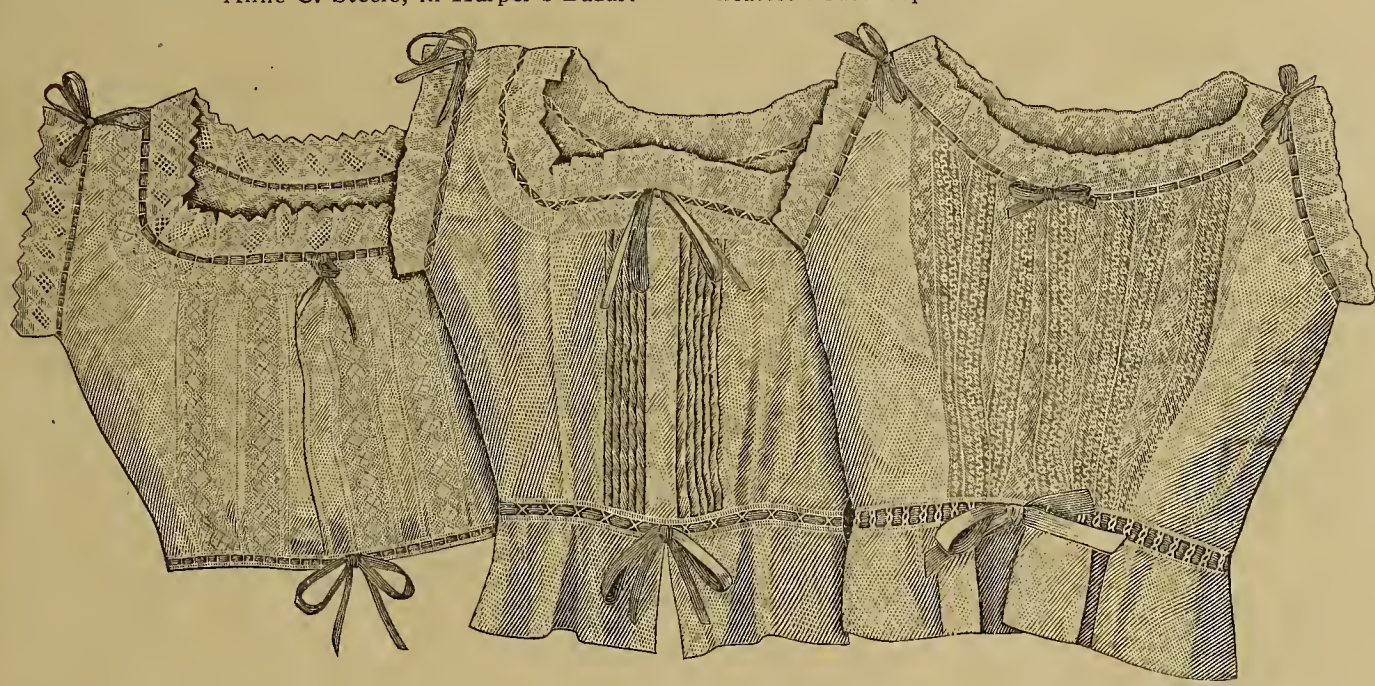
IN THE KITCHEN

Dumplings for a beef-stew will usually be lighter if a portion of the broth is removed and the dumplings placed directly on the meat and vegetables. The broth removed can be kept warm in another dish on the back of the range, and put into the tureen with the stew at serving-time.

Good cooks always prefer to bake bread and cake in old tins, as the result is always lighter and better than when a bright new pan is used. As new pans must sometimes be used, they should be well buttered on the inside and placed in the oven for several hours, or until the grease has become thoroughly cooked into the surface of the tin.

To roll bread-crumbs or crackers, place them in an empty salt-bag, then roll as if upon the board loose. They can be emptied without the trouble of scraping them up, there will be no loss of material, and no board to wash.

Glass milk-cans are a terror to many dish-washers because it seems so hard to get the inner surface perfectly clean. If the jar be half filled with warm water to which a little washing-powder or soda has been added, and a clean cloth or paper worked down into the jar and manipulated against the sides with a knife or fork until the scum is all removed, and then the cloth is drawn out and the jar thoroughly rinsed with clean, hot water, the glass will shine in a manner to please the neatest housekeeper.



CORSET-COVERS

These dainty affairs were all made by one young girl for her summer wardrobe. They are of India linen, combined with various kinds of insertions and edging, with heading at the waist, and trimmed with ribbons.

DANDELION WINE

One gallon of dandelion-blossoms and one handful of dandelion roots. Cover these with boiling water, and let stand twenty-four hours. If there is not one gallon of the liquid after straining add water enough to make that amount. Add five sliced lemons and three pounds of granulated sugar. Bring it to the boiling-point. Let it stand fourteen days, strain again, and bottle. It will keep for years without sealing, and is an excellent tonic. HOPE DARING.

CHERRIES

Cherry-time with all its delights is here. Great are the possibilities of this beautiful fruit, which extend from the natural fruit artistically served on branches from a grand old monarch of the garden on a fresh, dewy morning to the perfect salad which graces a festive dinner-table.

CHERRY SHORTCAKES.—Use a baking-powder biscuit-dough. Make the shortcakes individual size instead of one large cake; they are more fashionable, more delicious. Split and butter each one. Cover one half of each cake with sweetened cherries stoned; add the other half of the cake, and heap the cherries on top. A dainty meringue may be added.

CHERRY DUMPLINGS—Make a first-class biscuit-dough, roll it one fourth of an inch thick, and cut into squares. Pit the cherries, sweeten, place two or three tablespoonfuls upon each square, and rub the edges lightly with cold water. Press the edges together, and bake.

CHERRY TARTS.—Form tarts of puff-paste, fill with raw rice, bake, then remove the rice. Pit and wash two cupfuls of cherries. Bring to the boiling-point one half cupful of water and one cupful of sugar, then add two cupfuls of cherries, and cook ten minutes. Stir in one teaspoonful of vanilla and one teaspoonful of butter. Fill the tarts.

JELLIED CHERRIES.—Soak one half box of gelatin in one half cupful of cold water for an hour. Pour one cupful of boiling water over the gelatin, add four tablespoonfuls of sugar, and strain. As the jelly begins to harden whip with a wire egg-beater until it is frothing all the way through. Put a few cherries in custard-cups, and fill with the jelly. Keep in a cool place six hours. Serve with whipped cream tinted pink.

CHERRY SALAD.—Two pounds of stoned cherries, two tablespoonfuls of sugar. Stir thoroughly, and pour over a glassful of sherry. Serve very cold.

CHERRY SALAD NO. 2.—Two cupfuls of pitted cherries, one cupful of shredded celery. Carefully fill the cherries with walnuts or peanuts. Arrange on a bed of celery-leaves, and cover with mayonnaise dressing. Add one cupful of cold olive-oil drop by drop, stirring constantly, to one egg-yolk. Mix well one teaspoonful of salt, one half teaspoonful of mustard, one fourth of a teaspoonful of cayenne, one tablespoonful of lemon-juice, one tablespoonful of cherry-juice. Add this slowly to the oil and egg.

CHERRY SHERBET.—Boil together one pound of sugar and one quart of water for fifteen minutes. Add one quart of pitted sour cherries to the syrup. When cold press through a fine sieve, freeze, remove the dasher, stir in one egg meringue, and repack. ADELE K. JOHNSON.

A small plant-sprinkler or watering-pot is very handy for dampening clothes.

In putting flour into gravy for thickening, always use a flour-dredger, and there will be no lumps to be rubbed smooth.

When making a shortcake put half the dough in the pan, cover with melted butter, and then add the remainder of the dough. The two parts may be separated when cooked without any ragged edges, and baked in this way there is of course but the one pan to wash. INEZ REDDING.

WAYS TO COOK MACARONI

This article of food being composed largely of flour and water the greatest care must be taken to start it cooking in boiling water, never cold, as this causes it to assume a mushy appearance, and it must be preserved in a tubular form. The large-sized tubes are called macaroni; the quite small ones, spaghetti. There are imported varieties, and others produced in this country. Which is the best depends entirely upon the cook.

For a family of six break up one half pound into one-and-one-half-inch pieces. Pour over it enough boiling water to cover, and let it cook rapidly fifteen minutes, then pour off the hot water, and pour on cold water to whiten it; pour that off and return it to the stove covered with hot water again. It should cook at least forty minutes, and needs very careful watching to keep it from burning or cooking dry. Do not stir while cooking, but use a vessel with a handle, and toss it about to keep it from sticking. Season with pepper, salt and butter and a very little milk. This we call the plain style.

Another way to cook it is as above until tender, then put into a baking-pan with layers of grated cheese between layers of macaroni; cover the top with bread-crumbs mixed with a well-beaten egg, and set in the oven until browned on top. Again cook as directed, adding one pint of cooked tomatoes, seasoning well, and bake in the oven for twenty minutes.

Still another appetizing way is to add mushrooms and chopped beef's tongue or chopped veal. It is a very healthful dish, and especially nice for children prepared in the ways without cheese.

Spaghetti is cooked much the same way. Have the water boiling, then take the spaghetti without breaking it, putting it slowly into the water, curling it around inside the pan. Do this until you think you have enough for the family, then let it boil for about five or ten minutes. Take it out of the pan carefully, so as not to break it, and pour over the top one cupful of cooked tomatoes, after having seasoned it with pepper and salt. Some are fond of a dash of nutmeg in this dish. This is eaten, too, without cutting, winding it around the fork.

Almost two thirds of the macaroni that is consumed by the population of the United States is manufactured in Denver, Col. The demand is so great it can hardly be supplied, as there is only one factory, which is owned by an Italian. It is said he also exports quite a quantity of macaroni from his factory. W. D. MARSH.

HORSE-RADISH

HORSE-RADISH SAUCE NO. 1.—Mix two tablespoonfuls of grated horse-radish with one teaspoonful of salt, two tablespoonfuls of tarragon vinegar and one salt-spoonful of made mustard. Beat up the yolk of one egg in eight tablespoonfuls of cream, and stir into the sauce.

HORSE-RADISH SAUCE NO. 2.—Mix two tablespoonfuls of grated horse-radish with one tablespoonful of vinegar, one salt-spoonful each of salt and pepper. Mix thoroughly, and stir in four tablespoonfuls of cream beaten stiff. Fresh cream should be used. VIRGINIA REED.

WHY ARE YOU SICK?

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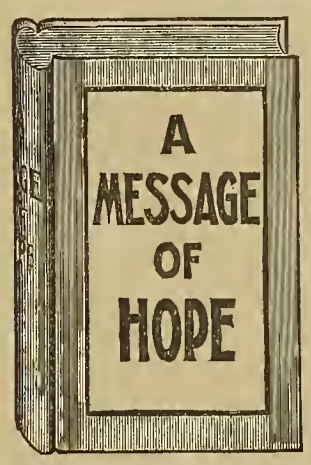

In order to reveal to suffering humanity the great discoveries he has made, and to explain to them his wonderful method of curing the sick, the Doctor has written a book, entitled "A Message of Hope," which every one in poor health should have. This book gives you the key to perfect health, and fully explains how thousands of hopeless sufferers have been cured by this system after being given up by the regular physician. So sure is the Doctor that his treatment will cure even though all else has failed that he has instructed the Institute, of which he is physician-in-chief, to give every reader of the FARM AND FIRESIDE who is in poor health several days' treatment absolutely free, in order that they may know positively that it will cure them before they are put to any expense whatever. This offer is genuine, and done purely to convince sufferers that the treatment is all that is claimed for it. Mr. J. Schlipp, of 157 Gregory Street, Buffalo, writes as follows: "About a week ago my wife received the diagnosis and trial treatment from you. She has been benefited more by you in one week than by all the other doctors we have had, and we have had one constantly for four years. The results of the treatment are wonderful." It will cost you absolutely nothing to test this wonderful treatment for yourself. Write at once for it. Address Dr. Peebles Institute of Health, Battle Creek, Mich., Drawer N-7, stating your troubles, and the doctors will prepare a special treatment to fit your exact condition, and send you free of cost a full diagnosis of your case with their professional advice and their book "A Message of Hope."

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Dr. Coffee Restored My Sight, says J. M. Davis.

J. M. DAVIS, Winterset, Ia.

Mr. Davis had been afflicted with weak eyes for many years. They would get better and then worse, and finally, a year ago, he was taken with a terrible inflammation of the eyes, ulcers formed and abscesses of each eyeball, which made him blind in four weeks; and having a neighbor who had been cured by Dr Coffee, he went to him at once and in four months cured the ulcers and granulated lids and restored his sight.

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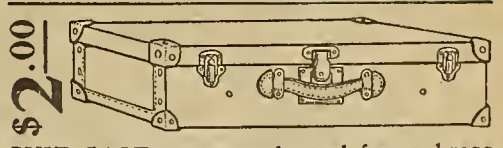

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The Family Lawyer

By JUDGE WM. M. ROCKEL

Legal inquiries of general interest from our regular subscribers will be answered in this department free of charge. Querists desiring an immediate answer by mail should remit one dollar, addressed "Law Department," this office.

MAKING A WILL.—J. L. S. asks: "Can a person write his own will? How must it be signed?"

There is no provision of law forbidding a person to write his own will. Unless the provisions desired to be made in the will are of the simplest character no one should, however, write his own will. Experience has demonstrated, in reference to such matters, the truth of the old adage that "two heads are better than one." Some of the best and brightest lawyers have written their own wills, and used words of expression the meaning of which as intended by them the courts have been unable to determine. A recent example is that of Samuel J. Tilden. Too great care cannot be exercised in the drafting of a will. If a person intends to make a will he should do so before one foot is in eternity. Frequently such matters are deferred until the testator, while mentally clear and bright, has lost physical ability to correctly make known his wishes. Courts will always strive to carry into effect the testator's intention, but such intention must be derived from the will itself, and words must be given their ordinary and usual signification. When a will is once executed and the testator has passed away, no power exists to give any other interpretation to the will than that which its words convey. If you wish to make a will, secure a competent lawyer, make known to him all your property and your wishes in respect to the same; likewise give to him the names of all the persons who have some claims to your bounty.

The will must be signed at the end. This is a statutory provision to prevent fraudulent interpolation. The signature may be made by the testator himself or by some one for him. It would be legal if only signed by initials, although this is not to be commended; the name should be signed in full. If the name is signed by another person, it must be in the presence of the testator and at his express direction. The signature must be attested by at least two competent persons who saw the testator subscribe his own name or heard him acknowledge that it was his signature.

ASSIGNORS AND BANKRUPTS.—B. M. writes: "If A makes an assignment for the benefit of his creditors, and turns over all his property to the assignee, is he released from further liabilty to his creditors. What effect have the United States bankrupt laws on assignments under the state laws for benefit of creditors? Is a bankrupt entitled to any exemptions?"

A would only be released to the extent that payment was made to any of his creditors. If a creditor failed to present his claim to the assignee he could at any time thereafter collect his claim in full from A, if A had sufficient property not exempt from execution that could be applied thereon. A person holding a claim against A, for which B was security, might collect the entire amount against B, even though the claim had not been presented to the assignee. If a person wishes to be released from all liability he must proceed under the United States bankrupt act.

The effect of the United States bankrupt law upon the insolvent laws of a state is that the bankrupt law supersedes the insolvent law. If a person makes an assignment and thereafter goes into bankruptcy it will be the duty of the assignee to turn over all the property, to be administered by the trustee in bankruptcy. It has even been held that the costs paid by an assignee under a state law could not be recovered after the person had gone into bankruptcy. The act of making an assignment is an act of bankruptcy, and would be sufficient cause to have a person declared a bankrupt, provided an action to that effect was commenced within four months.

In relation to exemptions, dower rights, etc., the United States courts follow the decisions and the laws of the state in which the bankrupt is a resident. Therefore, in Ohio a person going through bankruptcy would be entitled to the same exemptions as if he had made an assignment for the benefit of creditors.

The Family Physician

By ROBERT B. HOUSE, M.D.

TO PREVENT BED-SORES

Wash the parts three times a day with a solution prepared by dissolving one ounce of alum in one pint of water, to which add one pint of alcohol.

LIME IN THE EYES

When lime gets into the eye something must be done at once. Wash the eye thoroughly with a large quantity of warm water (for a little water but adds to the trouble by slaking the lime), and then introduce a solution of sugar and water. This is superior to solutions of vinegar or dilute acids, because sugar forms an insoluble compound with lime.

CONSTIPATION IN INFANTS

For constipation in infants and small children cathartics ought not to be given. Instead, let a small quantity of glycerin—one half teaspoonful—to which has been added a few drops of water, to make it flow, be injected into the rectum by means of a small hard-rubber syringe. This may be repeated every day when the act of evacuation does not take place naturally. The effect of the glycerin is that of a mild stimulant to the rectum, the result of which is expulsion of its contents. No harm can come of this treatment, while much damage does come from the use of cathartics.

HOW TO CURE DANDRUFF

Isadore Dyer in the *Medical Review of Reviews* claims that dandruff is very contagious and that the hair-brush is largely responsible for its spread. He tells his patients to throw away their brushes. Then he has them wash the scalp frequently. Men should wash as often as every other day, and women twice a week. After the wash he applies resorcin in bay-rum, three to five per cent.

He has never seen a case of dandruff that was not cured under this treatment. In gray-haired individuals or in fair-haired women resorcin sometimes causes a yellowish or reddish cast, which may be prevented by adding a little salicylic acid to the resorcin solution.

WHITEWOOD AS A CURE FOR THE TOBACCO-HABIT

The Liriodendron Tulipifera, also known as whitewood and yellow poplar, is one of the largest of the lumber-producing trees native to this country. The inner bark has been used to a considerable extent in years past as a domestic remedy for malarial conditions, or infused in whisky as a tonic or bitters.

This bark also constitutes a very efficient cure for the tobacco-habit. The fresh inner bark may be chewed, or the powdered bark may be mixed with sugar and extract of licorice and pressed into tablets, say of about five grains of the bark. These tablets are to be allowed to dissolve in the mouth whenever the desire comes to take a chew or smoke. The man who made the discovery cured himself, and he was a most inveterate chewer. He also gave it to many of his friends, with good results, finally selling his receipt to a large drug-house for fifteen hundred dollars.

While the remedy is cheap, it is also harmless, and at the same time a fine stomachic, resembling gentian in its action upon the gastric organs.—Eclectic Medical Journal.

Sunday Reading

AS WE GROW OLD

BY E. N. TUPPER

Youth always looks ahead to yearn
For gifts the coming years withhold,
But backward now our thoughts will turn
As we grow old.

Growing less prone to look before,
Lest coming days prove dark and cold,
The past will haunt us more and more
As we grow old.

Yet not too much of vain regret
The present for the past should hold,
For bright days come to cheer us yet
As we grow old.

We may not know what glad surprise
Some near-by day for us may hold,
For heaven just before us lies
As we grow old.

IMMORTAL LOVE

"CAN I tell you, can you tell me, why the sky is gray and the winds are chilly when only the other day the one had sunshine and the other warmth; because those little arms were round my neck, and those deep gray eyes looking love into mine, or because that serious young voice asked me serious questions, which I answered with my hand in blessing on a curly head?" No. It is all a mystery—labor, sorrow, love, life, all we have and are and suffer and enjoy—unless we regard them in the light of the cross of him who was the Man of Sorrows, and who is immortal love.—Churchman.

CONQUER YOUR DELUSIONS

It is interesting to look back over a successful life and see how many things, which experience shows were not realities, but simply delusions, have been conquered. They seemed very real when they confronted us in youth, and their ghostly shadows had power to fill us with dread and apprehension.

Ghosts are real to a child; its vivid imagination is full of things which strike terror to its young heart, but as it grows older the ghosts are gradually conquered. They become unreal and exist only in memory.

So many of the things we dread most, which loom up before us as almost insuperable obstacles, are seen when once passed to have been only delusions. To conquer this fear of unrealities, to trample under the foot these bogies of our own creation, is a large part of our life's discipline.—Success.

THE USE OF A BIT OF CHEER

There is nothing better for a human being sometimes than a little hearty praise. Many good people conscientiously act on the direct opposite, and seem to think nothing better than a little hearty blame. They are mistaken, conscientious in their blame as they may be. There are sore burdens enough in life, bitterness and pain enough, hard work enough and little enough for it—enough to depress a man and keep him humble, a keen enough sense of failure, succeed as he may; and a word of hearty commendation now and then will lighten his load and brighten his heart and send him on with new hope and energy, and if he have any reasonable amount of brains at all it will do him no harm.

Children are sometimes heart-starved for a little hearty praise. Boys will act up to the estimate put upon them, or at least try to, if they are worth their salt. A hearty word of commendation is meat and drink to them for the next endeavor.

It is so with men. The strongest of us cannot work without some recognition of our work. We want to know that it is considered good. Our own judgments are not sufficient for us. A "well done!" now and then makes us certain of doing better still in the future.—Preacher's Magazine.

AN EDITOR'S ADVICE

A great editor was delivering an address to students. He gave them plenty of advice, but one bit, which did not seem so very wonderful at the time, was worth all the rest of the lecture. This is it: "Seize the moment of excited curiosity for the acquisition of knowledge." We know a family which rarely spends an evening in general conversation without that sentence being quoted. It always provokes a smile, but somebody always steps to the dictionary or the encyclopedia or other source of information, and the point at issue is definitely settled.

The editor's advice accomplishes two things whenever it is followed. First of all, it adds largely to one's stock of definite and accurate knowledge. The very fact that interest is focused on the matter fixes the new item in the mind. And in the second place, the prompt observance of the rule is a great saver of time and a preventive of aimless discussion. We have known half an hour of argument to be expended on a question which a two-minute study of a competent book of reference would have answered beyond the possibility of dispute.

The editor's maxim has a still wider application to every young man and woman. Mark Twain has somewhere said that life is divided into two periods—one period in which we possess the capacity for enjoying life without the means, and the other period in which we possess the means, but have lost the capacity. The saying is only a half-truth, but it has this in common with the wise word of the editor. The "days of thy youth" are the days when interest in the best things in life and the highest purposes of life is strong and intense. Seize those days. Seize the days of aroused interest in noble things, the days of a new-wakened passion for righteousness. They mark flood-tide in the affairs of men. Let them pass, and there will come evil days "when thou shalt say, I have no pleasure in them."—The Epworth Herald.

"NUMBER ONE"

"He is a number-one boy," said grandmother, proudly. "A great boy for his book; indeed, he would rather read than play, and that is saying a good deal for a boy of seven."

"It is, certainly," returned Uncle John. "But what a pity it is that he is blind."

"Blind!" exclaimed grandmother; and the number-one boy looked up, too, in wonder.

"Yes, blind, and a little deaf, also, I fear," answered Uncle John.

"Why, John, what put that into your head?" asked grandmother.

"Why, the number-one boy himself," said Uncle John. "He has been occupying the one easy-chair in the room all afternoon, never seeing you nor his mother when she came in for a few minutes' rest. Then your glasses were mislaid, and you had to climb up-stairs to look for them. He neither saw nor heard anything that was going on."

"Oh, he was so busy reading," apologized grandmother.

"That is not a very good excuse, mother," replied Uncle John, smiling. "If 'Number One' is not blind nor deaf he must be very selfish indeed to occupy the best seat in the room, letting older people run up and down stairs while he takes his ease."

"Nobody asked me to give my seat nor to run errands," said "Number One."

"That should not have been necessary," urged Uncle John. "What are a boy's eyes for, if not to keep him posted on what is going on around him? I am glad to see you fond of books, but if a pretty story makes you forget all things except amusing 'Number One,' better run out and play with the other little seven-year-old boys, and let grandmother enjoy the comfort of her rocker in quiet."—Youth's Evangelist.

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W. F. Lohnes, a prominent business man of Springfield, Ohio, writes the following strong indorsement of the great kidney remedy, Swamp-Root, to the editor of the Springfield, Ohio, *Republic:*

SPRINGFIELD, OHIO, Feb. 21, 1901.

"Having heard that you could procure a sample bottle of Swamp-Root free by mail, I wrote to Dr. Kilmer & Co., Binghamton, N. Y., for a sample bottle, and it was promptly sent. I was so pleased after trying the sample bottle that I sent to the drug-store and procured a supply. I have used Swamp-Root regularly for some time, and consider it unsurpassed as a remedy for torpid liver, loss of appetite and general derangement of the digestive functions. I think my trouble was due to too close confinement in my business. I can recommend it highly for all liver and kidney complaints. I am not in the habit of indorsing any medicine, but in this case I cannot speak too much in praise of what Swamp-Root has done for me."

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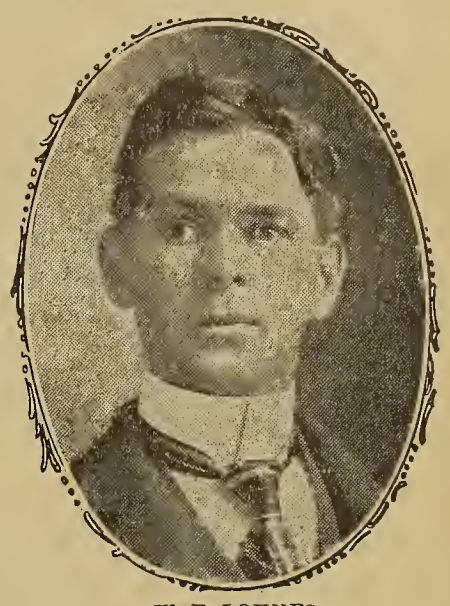

W. F. LOHNES

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Weak and unhealthy kidneys are responsible for more sickness and suffering than any other disease; therefore, when through neglect or other causes kidney trouble is permitted to continue *fatal results are sure to follow.*

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SPECIAL NOTE—If you are sick or "feel badly," begin taking the famous new discovery, Dr. Kilmer's Swamp-Root, because as soon as your kidneys are well they will help all the other organs to health. A trial will convince any one.

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Out of the Shadow

By FRANK H. SWEET

CHAPTER IV.

ON ONE of the numerous branches of the Peedee a small party had built a camp. It was a rude affair of poles and logs, and made no claim to architectural beauty. It kept off the rain and was a shelter for the camp equipage, and that was enough. On clear nights it was pleasanter to sleep outside in the hammocks, where stars and bits of sky could be seen through the tree-trops.

Almost in front of the camp was the dark, yawning mouth of a gloomy ravine. On the other side rose the rugged points and precipitous cliffs of a mountain peak. Beyond another towered still higher. To the right and left were peaks and hills innumerable. Directly behind the camp was a forest of birch and maple. A clear, sparkling stream of pure, cold water hurried from the forest and danced by the camp. When it reached the brink of the chasm it sprang forward with a merry bound. The music of the tiny waterfall mingled with the dreams of the sleepers as they swayed in their hammocks.

It is often the unexpected that happens. Two months before the three men had never seen nor heard of each other. The Professor was a grave, silent man, whose life was a mild exponent of mineralogy and geognosy; Mr. Draper was a graduate of Wall Street, and ever in search of profitable investment, while Tom Redding—he abhorred a less familiar title—was confessedly a disciple of pleasure, pure and simple. They had not a taste in common, and neither could conceive of pleasure in his companions' pursuits. But for all that—or perhaps on account of that—they grew to be fast friends.

Especially so were Mr. Draper and the Professor. They became almost inseparable. The latter was in search of specimens, and his knowledge of rocks and their formations made the search very successful. But when he had secured as many as he desired he was impatient for other fields. No matter how rich the specimens were, or what their presence might indicate, he had lost interest in the place. But here Mr. Draper's interest began. He did not care for the specimens except to note their degree of richness. Whence they came was the great point, and if the "finds" warranted it voluminous notes and careful maps were made. He made no secret of his desire to invest in mining-property, and was always ready to join the Professor in a hunt for specimens.

So it came about that Tom Redding was frequently left to himself. And he was satisfied. Hunting through the quiet valleys or fishing in the clear, deep pools of the mountain streams was more attractive than prowling about the ravines and gulches with hammer and specimen-bag.

Their coming together had been purely accidental. All happened to reach a hotel on the same day. When they inquired for a guide no one was found available. Bob Calhoun was in the office, and when he heard that the Professor was in search of "specimens" he volunteered his services. He was not a guide, he said, but had lived in the mountains all his life and knew "ev'ry p'int an' turn."

At his recommendation a camp was made. It would be more convenient and less expensive. At the end of a week all were delighted with the arrangement. The Professor could now arrange his specimens without danger of their being disturbed; Mr. Draper could make plans without fear of undesirable listeners, while Tom Redding declared he was pleased on general principles. He had never tried camping before, but after this would advocate it as something indispensable to the true angler and hunter.

Although a quiet man the Professor was fond of talking about his work. And it was not long before he discovered that Bob was a more than fairly intelligent listener. Ignorant of text-books and unfamiliar with the laws of evolution, he had gathered a rich store of information from actual work and experience. Often the Professor was startled by some pertinent question or assertion, and frequently he had to think a moment before replying. Gradually the evenings were given up to informal lectures on the day's work and discussion of kindred subjects. And not infrequently did Mr. Draper and Tom Redding find themselves growing excited over what they had hitherto affected to disdain.

After one of these discussions Mr. Draper and the Professor walked out to the brink of the chasm, where they continued their talk.

"What a pity that guide could not have had schooling," said the latter, as he took off his spectacles and wiped them; "he would have made a fine scholar."

Mr. Draper shrugged his shoulders.

"Too much animal in him for that," he answered. "He ought to have been a civil engineer or a soldier, or at least a railroad man."

One day Bob led them to a deep ravine that cut its way down the slope of the mountain. For some time they stood gazing into its shadowy depths, then Mr. Draper looked up.

"Isn't it a little dangerous?" he asked.

"Not if you're sure-footed an' have a clear head," Bob answered. "I haven't been down for some time, but I often used to go there for birds' eggs. I was thinkin' last night 'bout a queer ledge I found whilst diggin' out kingfishers' eggs, an' I 'lowed hit might pay us to look hit up."

Both Mr. Draper and the Professor gazed longingly into the ravine. At length the latter shook his head. "My feet and head have not played me any tricks as yet," he said, "but I do not wish to test them too severely. I propose we all go up to the top of the mountain."

But it was now Bob's turn to shake his head.

"I'm goin' to have some specimens out the ledge," he said, decidedly. "More I think o' hit, the more I feel bound to go. I was only a little chap when I found the place, but I rec'lect I thought the rock mighty queer—dif'runt from anything I'd ever seen. You-all can go up to the mountain whilst I hunt round a spell. You know the best path—same's we took last week."

"If Bob has no objection I think I will go with him," said Tom Redding, who had been gazing curiously into the depths below. "That tumbling river looks as though it might have a few hungry trout waiting for me."

"Hit's the best trout-stream in the mountains," replied Bob. "Three-pounders can be had a plenty. Folks rar'ly fish hit, an' the trout have time to grow."

Half an hour later the two stood at the bottom of the ravine. The descent had been made by a series of jumps, slides and tumbles that scarcely allowed time for breath. When they finally reached the bottom Tom Redding looked back ruefully.

"So that's the kind of thing that requires a clear head and sure feet," he said, sarcastically. "Strikes me it's a case of 'hippity hop and away we go.' Lucky the Professor had common sense to fall back on. If he'd tried the 'tumble act' he'd have been dead sure to have lost his spectacles."

Bob laughed, and said, as they started on again,

"I found this in the ravine yesterday"

"If the Professor an' Mr. Draper had been with us we'd have gone furder down 'fore we entered the ravine. You're spryer 'n they, so I kem this way. Hit's the quickest."

His companion grunted, but made no reply.

A few rods above them the stream plunged down the heaviest cataract in the gorge, and the rocks rose perpendicularly sixty feet or more on either side. Below the stream descended over a smooth, broad face of granite a hundred feet wide and sloping sharply for two or three hundred feet. Along this slide the stream wandered hither and thither from side to side, as though hesitating to hurry down, but toward the bottom it narrowed into a roaring, dashing torrent. At twenty paces distant the two could barely hear each other shout.

CHAPTER V.

MAKING their way down the slide they came to a broad, dark pool, where the water was comparatively quiet. Here Redding made a cast. Almost as soon as the fly touched the water it was taken with a dash; then the trout, feeling the hook, swayed off with a quick, sharp curve and circled half around the pool. Then he sank, only to reappear a moment later and make a wild dash across the stream. But a firm hand was at the end of the rod, and gradually his circlings became less fierce. At the end of five minutes a quick movement placed him in the landing-net. Several more casts were made, from which an equal number of fish were captured, and then they pushed down stream. Every plunge of the river now went into a deep pool, from which more large fish were taken, and Redding declared that none of them went under two pounds.

As they descended they found it impossible to wade except by keeping close to the banks. At one place they paused where the stream narrowed between high rocks. On the left bank a smooth slope of rock fell into ten feet of rushing foam, the upper edge of the slope lined with brush being some twenty feet above the water. The right bank showed a ledge of rock, down which one might go if it were possible to cross the stream. Bob tried the passage cautiously step by step, being careful to secure the position of one foot before he lifted the other. In midstream, with three feet of wild water sweeping around him, he looked back and saw Redding working along the sloping rock almost over his head, holding on by the bushes and swinging himself along hand over hand for twenty feet until he reached a ledge below. On his back was strapped his patent rod, which had been unjointed, and the landing-net.

It was some time before Bob found an opportunity to recross the stream. At last he did so by a series of long leaps from rock to rock, on one of which his wet boots slipped and he went headlong into the water. Fortunately it was on the edge of a deep pool, and he escaped with a wetting.

Soon after this they came to a place where the ravine broadened into a wide basin. The cliffs receded until they were at least a thousand yards apart, and between them and the river was a wide interval of massive rocks and tall-growing timber.

At this point Bob paused.

"I must leave the river now," he said. "You can go with me or keep on fishin'. I'll be back in 'bout an hour."

"I'll fish, of course," answered Redding promptly. "This stream is a revelation to me. It would have made old Izaak's heart glad. I shall always feel grateful to you for giving me a try at it."

So leaving him to play a trout that had suddenly bent his rod with a savage rush, Bob made his way up the bank into the woods. It was slow progress, climbing up one side of massive ledges and sliding down the other, creeping on hands and knees through dense underbrush, or utilizing the trunk of some fallen tree to pass a deep fissure. But at length he neared the line of cliffs. As he passed under their shadow he saw a small ball of paper lying at his feet. It was a curious place to find paper, and he picked it up. Unrolling it he saw the letter and check he had taken to Linda nearly two months before. He looked puzzled. What did it mean? The ball must have fallen or been thrown from the brow of the cliff. But how could it have fallen and no search been made for it? or why had it been thrown?

He carefully folded the letter and check and placed them in his pocket. He would return them to Linda on the morrow. He had not been able to speak to her since her father's accident, and this would make a good opportunity.

As he was about to move on he was startled by a sudden exclamation of anger. Barring his passage was Moses Grinnel, his eyes blazing and his fingers working convulsively.

"Spy!" he hissed. "What ye doggin' me fer? I've a good mind to serve ye like I did—" he stopped suddenly, and great drops of perspiration started out on his face.

"I ain't a-doggin' you, Moses. I didn't even 'low you was out o' bed yet, an' I'm afeared," soothingly, "that you'll be overdoin' an' a-hurtin' yourse'f. You've lost strength, an'—"

"I ain't sick," broke in Moses, fiercely. Then his mood changed. "Sure ye ain't a huntin' an' spyin' of me?" he asked, doubtfully, his fierce gaze becoming shifting and apprehensive.

"You an' me are too good friends to hunt one 'nother," said Bob, quietly. "'Sides, there's no reason." Then a sudden thought came to him. "Was you huntin' fer a letter?"

But instead of replying Moses gave an uneasy laugh and dashed into the underbrush. Bob could hear his receding footsteps as he clambered over rocks and tree-trunks.

"Mad's a loon," he said, regretfully. "Hit's a pity, for he's a mighty neighborly man, an' 'bligin. Hit'll be hard for the fambly."

A few minutes later he came to where the cliff extended into the ravine and formed a large triangular cave. One of the angles was composed of a clear, flint-like substance that gleamed with a strange metallic luster. As Bob saw it his eyes lit up with exultation. "I thought so," he said; "hit's jest the same as the Professor's specimen, only richer. I'd know hit anywhar."

Taking a hammer and chisel from his bag he set to work, and soon had as many samples as he could carry. Then he made an examination of the cliffs on each side of the cave.

"Hit'll cost money," he said aloud; "but I 'low a path kin be made—an' hit'll pay."

When he returned to the river he found Redding still fishing near where he had left him. As he came up the fisherman dexterously slipped the landing-net under an exhausted trout.

"Ready to go?" asked Bob, as the trout was transferred from the net to a place beside his fellows.

Redding hesitated.

"I suppose we might as well," he answered, regretfully. "I have as many fish as I can carry, and it would be slaughter to kill more. But how will we get out? We can't do the 'tumble act' again."

"Have to go furder down," answered Bob. "I know a path as will be easy climbin'."

Soon after he was startled by a sudden question from his companion.

"Know the Grinnels?"

"Yes," said Bob, hesitatingly.

"Splendid girl, that Linda. Pity she hasn't a good education."

"She's good 'nough as she is," said Bob, shortly. "How'd you get 'quainted?"

"Oh, I've been calling there off and on for the past month," answered Redding, pleasantly. "Took dinner occasionally. You see, I met Linda and that wild-eyed father of hers while on one of my fishing excursions. Happened to save the old man from a wetting, and perhaps worse. Queer chap, isn't he?"

Bob quickened his pace, but made no reply. And just then Redding was too much occupied in scrambling over the rocks to notice the omission.

As they left the ravine the sun was sinking behind the mountain line and gigantic shadows of pines were thrown across the valley. Wild pigeons were abundant in the trees. Now and then a flight of larger birds could be seen overhead. The wind was gentle, but it roared in the tops of the forest-trees, as if a heavy surf was breaking just beyond the ridge.

When they reached the camp the others had not returned. An hour later they came in, tired but enthusiastic.

"It was the most magnificent view I ever saw," said Mr. Draper. "Last week the air was too misty, but to-day it was clear as a bell. We could see the peaks of Otter in Virginia, the Cumberland Mountains of Kentucky and Tennessee, the great bald-headed Roan, the lofty Blacks, and innumerable ranges and peaks and hills of the Appalachian chain. I have been on lofty mountains before, but I never saw anything that approached this."

Chapter VI.

As her father recovered the use of his limbs Linda found her position a trying one. Watch as she would he sometimes eluded her vigilance and wandered off into the woods. On such occasions he was sure to be absent for the remainder of the day. And she soon found it was no use to search for him. Sometimes she discovered traces of his presence, but they always disappeared near a certain point of a deep ravine. At first she feared he had met with an accident, and was in an agony of terror until he returned. As this fear gradually subsided it was replaced by another.

Her father was losing his mind. She could not blind herself to the fact that every day was witnessing a change. As far back as she could remember he had been different from other men—more shy and reserved, more diffident and apprehensive in the presence of strangers. But since the accident this change had become more pronounced. A sudden shadow across his path, a quick footstep or an abrupt question was enough to make him tremble and turn white. Linda watched the change with growing fear. What did it all mean, and when would it end? Very rarely did her father's eyes meet hers now. They were always shifting and turning, as though in search of something—always filled with a blind, unreasoning terror.

One day as they were sitting on the bench in front of the cabin a party of horsemen emerged from the forest. Even before they drew rein Linda could feel her father begin to tremble.

"Have you-all seen or heerd anything o' Pete Gurney in these parts?" the leader asked, as soon as he came within speaking distance.

Linda answered in the negative.

"Small, dark man," the stranger continued, "with long scar on the left cheek, an' some squint in his eyes. 'Scaped from prison more'n two months ago, an' has been hidin' in the mountains ever since. Was seen nigh here only yesterday."

"We ain't seed a glimmer of him," said Mrs. Grinnel, as she removed her pipe, "an' ain't wishin' to."

"S'pose not. Wall, I reckon he keeps clost in the bush, but we'll ketch him. S'long."

For some time after they disappeared there was silence. Then Moses Grinnel said, in a trembling voice, "They was officers, Linda."

"Yes, I reckon so."

"An'—an' they was huntin' a man as had a scar on his cheek, an' who squinted. But hit ain't Pete Gurney, hit's Bill Rutherford, an' they can't git him."

"Why, paw?"

"'Cause he's dead, Linda—died more'n ten year ago. 'Twas his ghost in the bresh as kept me from seein' the tree fallin' the day I was hurt. I've off'n seen his face a-peerin' at me from out the bresh lately. He's a-watchin' me."

"But why'd he watch you, paw?" asked Linda, gently. "You never did him harm. I've heered maw say as Bill Rutherford was an old friend."

Her father did not answer. But she could see the wild look of terror coming back to his face. A moment later he arose and slipped into the cabin.

Later in the afternoon, as she was standing near the one window preparing supper, she saw him stealing across the clearing. Seizing her sunbonnet she hurried in pursuit.

"Oh, paw!" she called, "why didn't you wait for me?"

He stopped doubtfully.

"I 'lowed you was busy," he said, apologetically, as she came up.

"I'm never too busy for a walk," she answered.

Under the trees the shadows were already growing thick and dark. In the distance they could hear the muffled roar of the mountain stream. Overhead the wind played softly with the tree-tops. Birds and squirrels had disappeared, and it was yet too early for owls and loons to add their voices to the gloom.

Suddenly the silence was broken by the sounds of approaching horsemen. Linda and her father drew to one side of the path. There was yet sufficient light to distinguish objects at a short distance, and as the party came up Linda saw it was the same that had stopped at the cabin earlier in the day. But in its midst was another figure.

Recognizing Linda and her father, the leader drew rein.

"We ketched him, as I 'lowed we should!" he exclaimed; "but he fit wuss'n a wildcat. I reckon hit's his last scrimmage, though," he added, significantly.

Moses Grinnel did not hear him. He was gazing at the prisoner with a look of wonder and fear.

"Bill Rutherford!" he gasped.

But low as were the words the prisoner heard them. Even in the semidarkness Linda could see him grin sardonically.

"Yes, Bill Rutherford," he said, mockingly, "him as you 'lowed was thrown off the cliff. I reckon if you'd looked over, 'stead o' tearin' down the mountain, you'd 'a' seen him clingin' to the bresh. But hit's been a good revenge," and he laughed mockingly; "better'n I was 'lottin' on. Moses Grinnel, the bravest man on the mountain, as he used to be called, a-gittin' loony an' a-shakin' at his own shadder, has been a pleasant sight to me—a mighty pleasant sight. I was content to stay off an' leave him to hisse'f. Hit was the best kind o' revenge. If he'd been less chicken-hearted I'd 'a' tried something else."

"But how kem ye to be wantin' revenge?" asked Moses Grinnel. "I never 'lowed to harm ye—an'—an' ye must know that was an accident on the cliff. We'd both been a-drinkin'."

"Hit goes furder back 'n the cliff," said Bill Rutherford, fiercely. "I didn't keer fer that. But hit was you as won the girl I wanted to marry; hit was you as bought the place the sheriff sold away from me; hit was you as allers got on whar I failed. But I 'low we're 'bout even now. You've lost the best part o' your life, an' can spend the rest thinkin' how 'twas wasted on a shadder," and again his mocking laugh rang out. They could hear it long after his captors had dragged him away.

Not until the last sounds of the horses' feet had died away in the distance did Moses Grinnel look up. Then he said, simply, "Come, Linda, let's go back to your maw."

On his face was an expression she had never seen before. And his eyes looked straight into hers.

Chapter VII.

For some time they walked on in silence. Then he turned and placed his hands upon her shoulders. "Mebbe I've wasted my life," he said, slowly; "mebbe, but I 'low thar's a good many years ahead yet—an' thar ain't no more death shadder to crush the life out o' me. I ust to be ambitious, but hit all went over the cliff with Bill. An' 'twas an accident, Linda," he added, earnestly. "I never 'lowed o' his fallin' till I stood thar by myse'f. I've been a-huntin' some trace o' his body ever since."

"Well, hit's all gone by now," said Linda. "Let's try an' forget hit."

Overhead the stars were beginning to show, while below them a gray bank of mist was rolling up from the valley. Here and there the shadows were broken by belts of moonlight.

When Linda came down the ladder from her chamber the next morning she found her mother standing by the window. On her face was an expression of deep concern.

"Your paw's a-grubbin' bresh out yander, an' he's whistlin'," she said, anxiously. "He must be wus."

Linda smiled.

"Paw 'lows he's goin' to be his own se'f ag'in," she said, brightly. "You was asleep last night, else we'd told you. He 'lows he's jest goin' to begin life."

When Moses Grinnel came in to breakfast an hour later the two women looked at him curiously. The customary figure with its slouching step and shifting, uneasy gaze had disappeared. In its place was a tall, broad-shouldered man, whose face was flushed with the morning's exertion. With a curious pain Linda felt she had never known her father.

As soon as breakfast was over he arose and took his coat from its peg behind the door.

"Now if thar's any empty kettles ye want filled with ile, or butter, or lasses, I'll take 'em," he said. "I reckon I'll go down to the settlement an' see 'bout gettin' a horse an' cow. They'll make the place more lively. I reckon I kin pay some, an' work out the rest. I ust to be a mighty good carpenter."

Mrs. Grinnel looked across at Linda.

Noticing the glance, he broke into a good-humored laugh. At its sound both women started violently. Linda felt a sob rise in her throat. It was the first time she had ever heard her father laugh.

A few minutes later he left the cabin, and soon after they heard him whistling to his dogs. As the sound of his footsteps died away Mrs. Grinnel dropped her face upon the table.

"Hit ust to be like that when we was first married," she sobbed. "Hit seems like a long, black shadder, an' if only my crutches wa'n't here I'd 'low I'd been a-dreamin'."

Linda arose, and after passing her hand caressingly over the thin, gray hair, went out and closed the door softly behind her.

The morning was glorious. Every hill and peak and mountain range was bathed in the rich, warm sunlight. Even the shadows of the valleys and ravines looked cool and inviting.

Almost involuntarily her steps took the mountain path. There was no lack of companionship now. Every bush and tree seemed to have its feathered songster, and numerous were the challenges she received as she passed along the forest path. Frequently she was tempted to answer, and her clear, rich notes met with quick response from the concealed choristers. By the time she had reached the ledge overlooking the ravine she felt that she was almost in harmony with her surroundings. She tried to persuade herself that she was perfectly happy. But deep in her heart was an unspoken regret that the letter had not waited until now before making its appearance, or that she could not have looked into the future and been ready for its changes.

She was aroused by approaching footsteps. A moment later and Bob Calhoun stood before her.

"I've been down to the cabin," he said, "an' your maw 'lowed you'd come this way. I found this in the ravine yesterday," and he gave her the letter and check.

As she took them the same look came into her face that he had seen before.

"I'm so glad, Bob," she said, in a low voice. "This is all that was lackin' to make me perfectly happy. I ain't deservin' hit all."

He looked at her wistfully.

"I wisht I could do more'n bring letters," he said. "I'd give you the world if I could."

"I know hit, Bob."

Then there was a long pause. At last he said, slowly, "Tom Redding's goin' next week. He 'lowed him an' you was 'quainted."

"Yes."

"They're startin' a sort o' comp'ny, an' he's 'greed to take sheers. Him an' Mr. Draper's goin' North to 'range fer machin'ry. They'll be back next month." Then he paused, but after a moment asked, abruptly, "Do—do you like him, Linda?"

She looked at him with her grave, earnest eyes.

"Yes; he's ast me to marry him."

He started. When he spoke again it was in a husky voice. "You're both deservin'. Tom's a good feller, an' is pow'ful rich. You'll have a fine life."

She smiled slightly. "I like him right well," she said, simply. "He's a good man. But I don't love him. I told him I couldn't be his wife."

A quick light came into Bob's eyes. She saw it and stepped back.

"No time fer that now," she said, her face breaking into a merry smile. "We must get learnin' first. I'm goin' off an' study books an' music."

"An' I have a grand offer to take charge o' the new comp'ny's works," he returned, eagerly. "I'm goin' to study civil engineerin' an' everything that'll he'p me to know 'bout the business. Arter awhile Mr. Draper 'lows I'm to have some interest in the comp'ny. You see, I found the min'ral ledge they're goin' to work." Then he added, more slowly, "An'—an' arter we get the learnin'?"

But she only smiled.

THE END

SAMMY'S SURPRISE

BY ELLIOT WALKER

Sammy Greggs hated to pass the Hunter boys' house, especially when he had his little cart with the clothes in it, and could not run.

His mother worked very hard—he knew that—and he was going to buy her a horse and carriage, as well as a much better house than the Hunters', when he grew to be a man; but that was a long way off, and at present his trips with the clothes-cart, which he despised, had to be made.

He heard the shouts of the Hunters at play in their back yard as he sneaked by in the road, praying that they would not spy him. Vain hope! Wilfred, the younger, looked around at the wrong moment.

"Jack!" he yelled to his brother, "there's that washerwoman's boy. Let's go for him!"

Poor Sammy gripped the handle of his cart and his heart beat fast. "I won't let 'em see I'm afraid," he said to himself. "I ain't!" He walked along trembling, but trying to appear valiant.

Jack had started forward, his brown eyes dancing. Now he stopped, looking thoughtful. "Hold on, Will," he said. "He's no bigger than we are. Don't let's pick on him. We scared him to death the other day. Suppose we make up with him, just for fun?"

Wilfred, eight years old and belligerent, grinned doubtfully. "No fun in that!" he said.

"Aw! come on," said Jack. "You give him one of your apples, and I'll give him one of mine, and we'll walk along and talk to him and make him feel good. What's the use of being mean?"

"All right! You can do the talking, though. I don't know what to say to him," assented the little brother, rather regretfully.

Sammy in the road felt a sinking sensation as they approached. "They is going to peg me with those hard apples," he thought. "If they do, I'll, I'll—" He stopped, doubled up his fist and glared.

"Have an apple, Greggsy?" invited Jack, kindly, extending his offering. "Say, I'll pull your cart for you. Kind of heavy, ain't it?"

"I don't want your old apple, and I can pull my own cart," responded Samuel, in a surly tone, suspecting treachery.

"I mean it—it's a good one," said Jack. "Honest Injun! I ain't fooling. Try it!"

Sammy took the apple and bit it gingerly. "Tastes all right," he observed. "If I bite into pepper or anything I'll ding it at you."

"You may," said Jack, laughing; "it's all right, though."

"Here's another," said Wilfred, timidly. "We've lots of 'em in the house. Want some to take home?"

This unexpected burst of generosity startled Jack. "Well," he remarked, slowly, "run in and get him a couple more, Will. Two's enough, I guess."

Sammy began to unbend. "You fellers ain't so mean as I thought," he said. "I was hating to come by."

"Pshaw!" laughed Jack, "you needn't be. If you hadn't, you'd have missed four apples. Nothing mean about us if you know us."

Samuel grinned. "I don't go much with your gang," he remarked. "They never cared to be decent, and I don't trail 'round after nobody. Here, you can pull the cart if you want to. Go ahead!"

"Here's the two biggest ones in the pan!" cried Wilfred, running up. "You can't get 'em in your pockets, Greggsy!"

"I'll put 'em in the cart," returned Samuel, gratefully. "My little brother and Jenny will be tickled to death. So long! I've got to hurry. I'm obliged to you. Say, I know a dandy place to catch perch—I'll show you any time you say."

"Good!" cried the brothers. "We'd like to know it."

They stood watching the departing figure, loudly munching his apple. "He ain't such a bad feller when you get to know him, Will, is he?" said Jack.

"No, he ain't," was the reply. "Wonder where that perch hole is?"

"Mother!" said Sammy Greggs, as he hauled out the apples just before supper, "those Hunter boys are mighty good fellers when you come to know 'em."

It is not growing like a tree
In bulk doth make man better be,
Or standing long an oak three hundred year,
To fall a log at last, dry, bald and sear.
A lily of a day
Is fairer far in May;
Although it fall and die that night,
It was the plant and flower of light!
In small proportions we just beauties see,
And in short measures life may perfect be.

—Ben Jonson.

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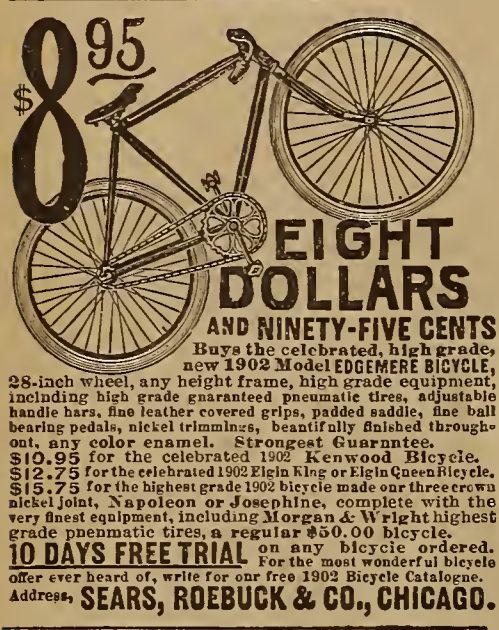

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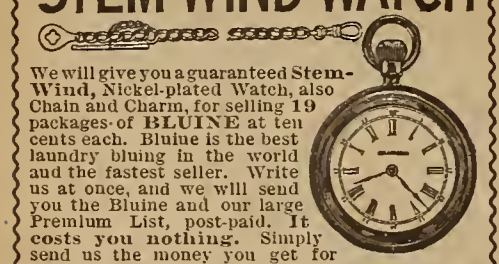
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How to Dress

INDOOR TOILET

AMONG the smartest of the season's materials Liberty satin foulard is in the lead. The softness of the material lends itself gracefully to the outlines of the figure. It is brought in all colors, but the blues and greens are the favorites.

The gown illustrated is in one of the fashionable blue colors patterned with white and touches of black, trimmed with black velvet ribbon. The straps of velvet are held in place by turquoise buttons. The graduated flounces give a peculiarly graceful effect to the skirt.

The waist, in the novel Gibson style, contributes the broad effect over the shoulders, the vest being of soft white mousseline-de-soie. The sleeves are combined also with the white mousseline, which forms a puff.

BLOUSE 4094—SKIRT 4065 WAIST 4112—SKIRT 3890

AFTERNOON GOWN

The simple elegance of this gown, which is brought out in all the graceful lines peculiar to the material, which is of pretty color crêpe de Paris, can only be the outcome of the soft, clinging materials. These come in various colors and fabrics, and the shades of tan or putty-color in all gradations will be a favorite choice of the well-dressed woman.

The trimming of lace upon the waist must match the material in color, while a touch of one's own favorite color may appear in the chemisette-front. Lavender, green and the brightest of geranium-red are the colors that combine with it best. The irregular trimming of the waist is a very smart effect. This is only upon the outside material. The waist-lining can have a straight front closing. The backs are tucked to give a tapering effect to the figure, but the fronts are tucked in groups only yoke-depth. The chemisette is soft and full and is closed at the left side invisibly with hooks and eyes.

The sleeves are tucked in the upper portion, but fall into soft puffs below the elbows, and gathered into deep cuffs.

The skirt is cut with front gore and wide side portions, that are tucked at the upper edge to give a yoke effect upon the hips, the back breadths being laid in inverted plaits. The flounce is tucked one third of its depth, and is trimmed with three rows of narrow black velvet ribbon. Finish the collar separately.

A DAINTY LITTLE FROCK

This charming little dress for a child is conceived in the finest of white Persian lawn, although any of the season's sheer white fabrics can be chosen for it. The waist is tucked in a yoke-depth from the neck and shoulders, and below that is allowed to fall full and soft. The skirt is a straight-breadth skirt of from three to four widths, suiting the child, and is tucked in small tucks from the waist downward, about half way to the knees. A ruffle with an edging of lace gives a finishing touch to the skirt.

The sleeves are made in elbow-style, of tucks and lace insertion, finished with a four-inch frill to match. Insertion is employed as trimming throughout the garment. The waistband is a tie of velvet ribbon one and one half inches wide.

Any one of these patterns will be furnished from this office for ten cents.

GIRLS' DRESS 4102

MATERIALS

It seems as if every season would exhaust the possibilities of beautiful materials, but one is surprised by new effects all the time. The beautiful mercerized goods, with its silky effect, makes up into charming house-gowns, which with care can last the entire season without laundering.

For young girls and young matrons these materials work into the most bewitching gowns at a small expenditure, and if one is deft with needle and scissors can be produced at home, saving thereby many additions to the dressmaker's bill.

Soft, gauzy materials in all colors are to be much worn, though the preference will be given to black. This will be affected in an elaborately ruffled garment, from seven to nine small ruffles upon the cut ruffle, and a group of three or five above that upon the main skirt. Baby ribbon will be the trimming best suited to this, both in silk and satin.

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Wit and Humor

WANTED THE BILL OF FARE

STOUT PARTY—"Now, then, waiter, what have you got?"

Waiter—"Calves' brains, deviled kidneys, fried liver—"

Stout party—"Here! Bother your complaints! Give me the menoo!"—Judge.

HIS NON-PROGRESSIVENESS

Farmer Dunk—"That 'ere hired man of yourn is pretty slow, ain't he, Ezry?"

Farmer Hornbeak—"Yuss, he's too golvummed slow to make a successful pallbearer."—Judge.

CASSIDY'S LUCK

Casey (to Cassidy, who has just lost his arm in an accident)—"Oh, my! oh, my! but Oi'm sorry fur ye, man."

Cassidy—"Tut, tut! Shure, Oi'm in luck. That was the arm Oi was vaccinated on, an' 'twas jist beginnin' to hurt me."—Philadelphia Press.

IT MICHT HAE BEEN WAUR

Good stories are always plentiful about golf-caddies. A St. Andrews caddie named "Mathie" Gorum invariably remarked after a poor shot by the person he was serving, "It micht hae been waur." He meant to be consolatory and encouraging. His master, a clergyman, was wearied with his well-meaning flattery. Accordingly, to make sure that he would squash the remark for once, he told the caddie he had a terrible dream the night before.

"Mathie, my man, I dreamt that I was in the place where the wicked are punished. I saw the wretched ones tortured; they were swimming in a lake of boiling pitch, and could not get landed for red-hot pitchforks thrust in their faces by demons."

He halted a minute, with his tongue in his cheek, when in perfect coolness the caddie answered, "Aye, sir, that was a bad dream; jist awful; but it micht hae been waur."

"Waur, you fool! How could that be?"

"It micht hae been true."—St. James Gazette.

ELI PERKINS' STAMMERING STORIES

"In his lecture last night," says the Los Angeles *Times*, "Eli Perkins showed great art in telling stammering stories. The one on Sam Jones caused great laughter, but the laughter was caused by Eli's inimitable way of telling it.

"It seems that Sam arrived very late at the Spirit Lake Chautauqua, and had to rush through a hasty dinner before he struck his waiting audience.

"'W-w-what will y-you h-have?' asked the stammering waiter, slowly.

"'Dinner, dinner; quick, hurry up!'

"'Will you have some sou-sou-soup?'

"'Soup!' exclaimed Sam, rushing his fingers through his hair. 'Yes, soup—anything!'

"'Will you have r-r-roast bee-beef?'

"'Yes, yes; trot it on! Hurry!'

"'And mac-mac-macaroni?'

"'Thunderation, yes! Now git!'

"'All ri-right,' said the waiter, slowly, 'but I want to ask you one more ques-ques-question.'

"'Out with it, fool!' said Sam, pounding the table with his hand.

"'Well, I wa-wa-want to ask you if you came here to eat or ha-ha-have a f-f-fit?'"

THE BEST SHE COULD DO

"There is only one reason," he said, "why I have never asked you to be my wife."

"What is that?" she asked.

"I have always been half afraid you might refuse."

"Well," she whispered, after a long

silence, "I should think you'd have curiosity enough to want to find out whether your suspicion was well founded or not"—Record Herald.

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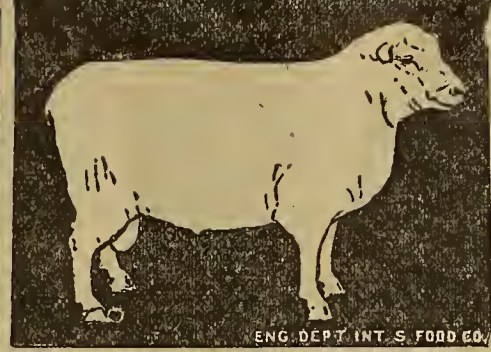

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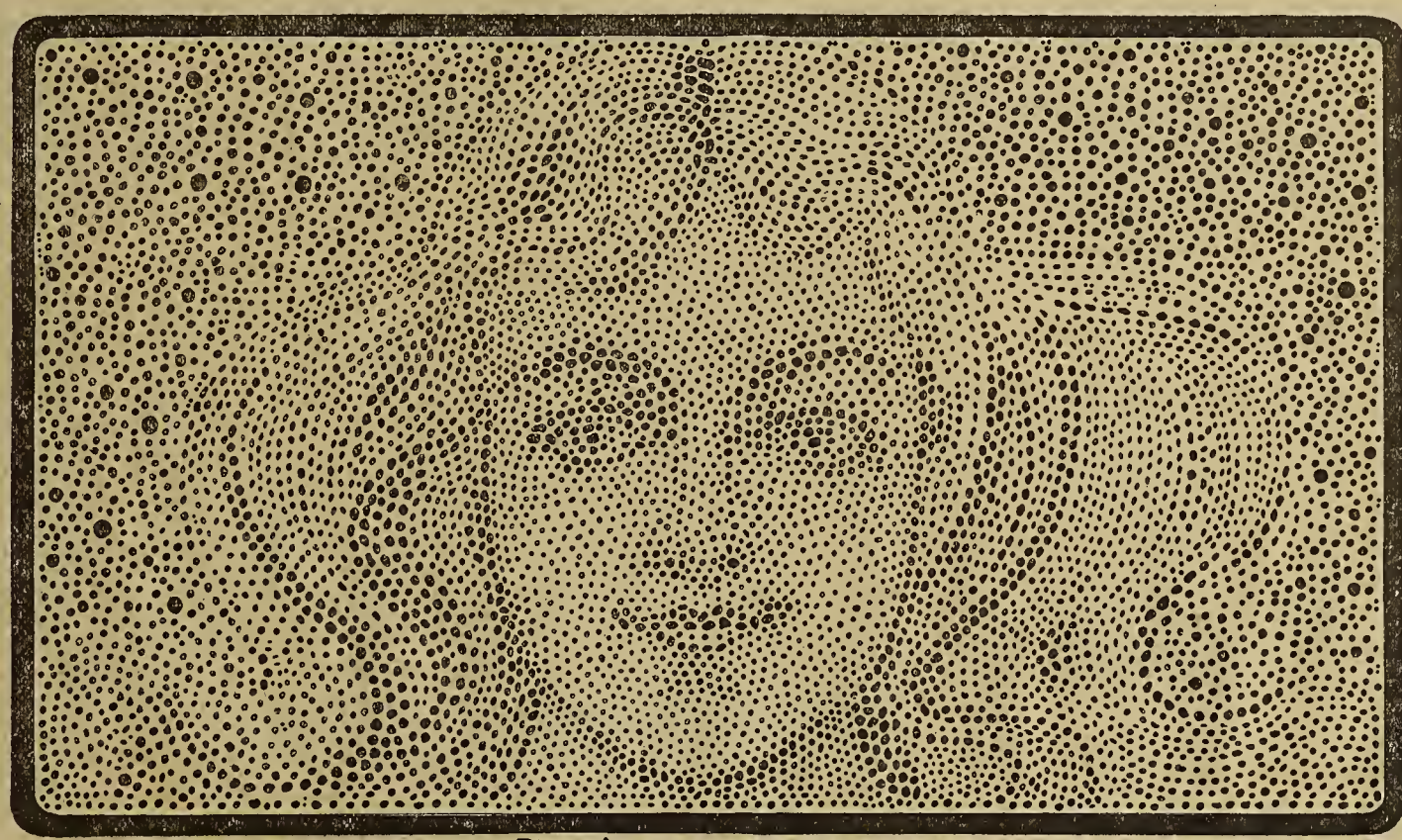

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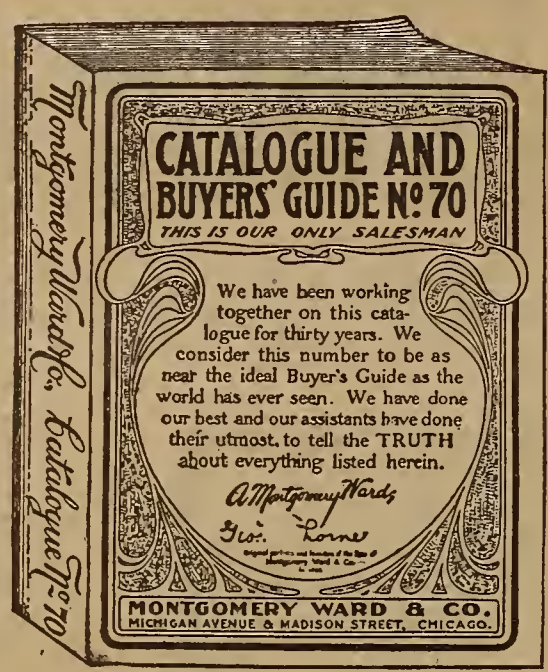

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THE COLLECTION OF 5 ROSES INCLUDES ALL OF THE FOLLOWING COLORS:

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SIX DIFFERENT COLORS, AS FOLLOWS:

One deep golden yellow, one rose-pink with soft satin finish, one fiery red, one velvet rose with silky texture, one pure ivory-white, and one creamy-white showing a tinge of pink.

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One snow-white, one brilliant crimson-scarlet, one nankeen-salmon, one beautiful pink.

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SIX DIFFERENT COLORS, AS FOLLOWS:

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COMMENT

READER, kindly read the May issues of the FARM AND FIRESIDE carefully and critically. Then send to the Editor a note or postal giving your opinion of the new "make-up." Your honest opinions and criticisms will be welcomed.

Nearly one month ago meat-prices reached the high point that checks demand both for export and home use. An equilibrium will soon be established between the higher prices and the reduced demand, but the outlook is that farmers can command good prices for fat cattle, sheep, hogs and poultry for some time to come. Take good care of the spring pigs.

The House and the Senate quickly got together on the Oleomargarine Bill. Hereafter oleo must sell on its own merits as oleo, and not fraudulently as butter. There will be a fair field for the dairymen who make good butter, either in creameries or private dairies. Success to them. But in this progressive age, when improved dairy methods and apparatus are within the reach of all, the people who make butter so poor that it has to be "processed" or "deviled" before it is fit to look at don't deserve any sympathy or good wishes.

The Department of Agriculture recently issued a statement, showing that during the fiscal year of 1901 the United States exported farm products to the value of nine hundred and fifty-two million dollars—an increase of more than one hundred million dollars over 1900, and the largest in our history.

During 1901 the United States imported agricultural products to the value of three hundred and ninety-two million dollars, or twenty-eight million dollars less than in the preceding fiscal year.

AFFAIRS OF NOTE AND MEN OF MARK

Cuban Independence Day comes on May 20th.

For patriotism and for pride and patience in carrying burdens of his own making John Bull is unexcelled. He has just submitted to a bread-tax, and subscribed thirty or forty times over to a new war loan.

RUSSIA AND CHINA

The new treaty between Russia and China is an international affair of world-wide importance. By its terms Russia agrees to restore the civil administration of Manchuria to China, withdraw the Russian army within one year, and to surrender all claim to exclusive railway and mining privileges in that province, pledging herself to the "open-door" principle.

This treaty is the crowning act of American diplomacy in affairs of the Orient. "Secretary Hay," says Count Cassini, the Russian embassador, "has done more than any other living man to solve the Eastern problem. All the powers have now adopted his platform for the integrity of the Chinese empire and the open door."

AMERICA'S SEAT OF EMPIRE

In a recent address at the St. Louis World's Fair grounds Vice-President V. P. Collins of the National Editorial Association recalled the prophecies of two statesmen as follows:

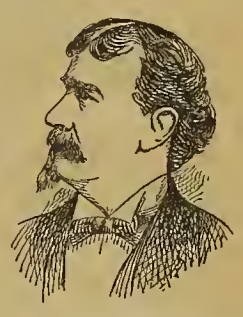
"After the close of the war of the Revolution the United States was confined east of the Allegheny Mountains, and it was supposed that that limit would be maintained; but one might as well undertake to confine the air in a seine or a net as to hold the American spirit within limits. Settlers broke over the Alleghenies into the Ohio Valley and the Mississippi, and the fertility of the soil was such that crops seemed to grow spontaneously; but there was no egress for the harvests, no access to foreign ports. Spain held the cork of commerce, and bottled up the settlers by holding New Orleans, until, in spite of American patriotism, there was a feeling that they would be compelled to secede from the central government and annex themselves to Spain for the sake of access to the New Orleans port. This became intensified when, instead of Spain, Napoleon became the power. The great Napoleon was approached finally with the proposition to purchase the port of New Orleans, or the right to the free navigation of the Mississippi. He was about to enter into war with England, and foreseeing the possibility of the coming Waterloo, he declared that he would sell not only the port of New Orleans, but the whole Empire of the West; for, he said, 'If England conquers us we will raise up on the American continent an empire greater than England, through which we shall have our revenge.'

"Some years ago, in the first Lincoln campaign, Secretary Seward, standing on the capitol steps at St. Paul, Minn., declared that he had looked over the continent to determine where would be the future city of commerce and political power in America. He had considered Mexico, where once had been the glories of Montezuma's power, and decided that it was not there. He had looked to the East, but it was not there. He had looked north to Winnipeg, and had contemplated the vast domain of territory in the North and in the Northwest, but had decided that it was not there; and to the far West. But, he said, that as a right conclusion of all his investigation he believed that the ultimate seat of power, both commercial and political, would be not far from where he then stood, upon the capitol steps of Minnesota."

America's "star of empire" is now found where Napoleon and Seward predicted, swinging above the great prairie region of the Central West. A census bulletin just issued shows that this region has outstripped all other natural, topographical divisions of the country, and now ranks first with a population of 13,300,970—more than one sixth of the whole population of the continental United States, and about one half that of England and Wales.

Nelson A. Miles began life on a Massachusetts farm. He is now rounding out a long military career as Lieutenant-General of the United States Army. When the Civil War began, in the twenty-first year of his age, he raised a company, and volunteered his services. From boy lieutenant on his first battle-field to the highest rank in the volunteer service at the close of the Richmond campaign his career of bravery, services and rapid promotion is the pride of his countrymen. While Colonel in the regular army he became celebrated as the "Indian-fighter."

One month ago Henry Clay Evans filed his resignation as United States Commissioner of Pensions, the office he has held since 1897. President Roosevelt accepted his resignation, to take effect after his successor had been selected, and at a time when there could be offered to him a position which "the President would regard as a promotion, and a fitting reward for his excellent services." Two weeks later the death of William McK. Osborne, Consul-General at London, made a vacancy in what is one of the best positions in the United States foreign service, and it was promptly offered to Colonel Evans.



Eugene F. Ware—native of Connecticut, soldier from Iowa, and lawyer and poet of Kansas—is the successor of H. Clay Evans as Commissioner of Pensions. At first the selection of Mr. Ware caused no little surprise, as he was never known as a politician, and had not sought the office. But it is the President's way of settling matters when Congressmen cannot get together and agree in recommending the right kind of a man for an appointment to go outside the list of rival applicants and pick a good man himself.

Captain Ware served in both the Iowa infantry and cavalry during the Civil War, and later in various Indian wars. Since 1871 he has practised law in Kansas, and become one of the leading lawyers of the state.

Leonard Wood—surgeon, soldier and military governor—was born at Winchester, N. H., October 9, 1860. He graduated at the Harvard Medical School in 1883, and began his military service in 1885 as lieutenant and assistant surgeon under Miles in Indian warfare. In Lawton's expedition against Geronimo he distinguished himself as a fighter, and later received the medal of honor.

At the outbreak of the Spanish-American War he was selected by his friend Theodore Roosevelt to organize and train the "Rough Riders." The story of this renowned regiment under Colonel Wood and Colonel Roosevelt is a familiar one. After the surrender of Santiago, Wood, already a brigadier-general, was appointed to command the city. By tact, skill and administrative ability of the highest type he made Santiago a safe, orderly, clean and healthful city—an object-lesson for the regeneration of Cuba. His wonderful record as commander of the department, military governor of the city, and civil governor of the province of Santiago, logically made him in due time the Governor of Cuba.

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Mr. Greiner Says:

ORCHARDS

DWARFS VERSUS STANDARDS.—We may plant a standard apple-tree, and expect good crops from it even if left occasionally in sod or under neglect. But when we plant dwarf trees of any kind, even including quinces, we are not sure of satisfactory crops unless the ground is kept in a high state of cultivation right along. Just examine some of these large blocks of dwarf pears, quinces, etc., all over the country—crippled, diseased trees, dead wood, standing in old tough sod, and occupying space that might be filled by something useful instead of worthless. There is urgent need of the ax. Dwarf trees, in short, seem to me to be garden-trees rather than orchard-trees, and as garden-trees they may possibly have a place.

THE USE OF FILLERS.—Close planting has often been recommended and practised. Trees of the desired varieties are planted at regular wide distances for permanent business, and other early-bearing sorts are set between the others in both directions. The idea is to have these early-bearing sorts give a few crops while the trees are yet comparatively small and before the permanent trees need all the room. Then the "fillers" are to be cut out. The plan will seldom work, however. It came to a discussion at the last meeting of the New York State Fruit-growers' Association. One expert orchardist said, "If you don't have the sand to cut them out in good season, don't plant fillers." And others, among them J. H. Hale, of Connecticut, are against the practice of planting fillers on general principles. People as a rule have not the courage to cut down trees when they "can just as well take off one more crop from them," and the consequence is the same as that of too close planting, resulting finally in these worthless orchard forests as we have them around here in plenty.

ORCHARD-DESTRUCTION.—The first step in the management of many of our older orchards, in my own vicinity as well as in many other important fruit sections, is "the free use of the ax." Destruction seems at present more urgent than any other phase of culture. There are hundreds and thousands of acres of thrifty apple-trees that are valueless to owner or renter. It is the style of planting at the beginning and neglect afterward that have killed the usefulness of the trees. We have in this vicinity great blocks of apple orchard that are forest-like in their density, prolific breeding-places of all sorts of noxious insects and fungous diseases. No crop of apples has been gathered in these sunless wildernesses for many years, and none is expected except crippled fruit on crippled trees or on the outside of the blocks. What fruit has been grown was a damage to the whole apple trade and an injury to the more successful grower—abominable rubbish worse than nothing. Yet it seems a hard task to convince the owners of the fact that these trees are worthless and really a nuisance, or bring them to the point of consenting to either the entire annihilation or the reclamation or rejuvenation of these orchards. With three trees cut out and one left, and the latter well pruned and the ground plowed up and kept under thorough tillage, such a reclamation or rejuvenation may be possible and feasible. But nobody seems to be willing to give this treatment.

DOUCIN STOCK FOR APPLES.—On general principles I prefer standards. Prof. S. A. Beach, of the New York Experiment Station at Geneva, stated at recent horticultural meetings that the station, in consideration of the difficulty experienced in treating large standard apple-trees for the San Jose scale, especially by fumigation, and such treatment becoming more and more necessary over constantly widening areas, has undertaken some tests with trees grown on dwarf stock. Paradise or "French paradise" stocks have been used for many years whereon to train the trees in bushy, espalier or cordon forms. This stock, like quince-stocks, is shallow-rooted and seems to need garden soil and garden culture as already mentioned in a general way. Not all varieties of apples form a congenial union with this stock; but varieties which do well on it may begin to bear at four or five years from the bud or graft, which would ordinarily be two or three years after being planted in the orchard. Under favorable circumstances they may continue to bear twenty years or more. But neglect them and they will soon be gone. The Doucin stock also dwarfs the tree grafted or budded on it, but not to the same extent as the Paradise stock. Every variety of apples seems to form a good union with it, and grows as healthy, vigorous and productive as it would on standard roots. I have a few such dwarf trees among standards, and usually gather a few apples from them. The varieties are Red Astrachan, Yellow Transparent and other early apples. There seems to be some difference of opinion among expert growers whether varieties come into bearing any earlier on this stock than when grown as standards. I believe they do, at least to a slight extent. In the dwarf orchard of Messrs. Ellwanger & Barry, of Rochester, N. Y., well-established trees of productive sorts on Doucin stock planted eight feet by eight feet apart have borne two barrels of good fruit to the tree. "Whether these figures give anything like a fair indication of the yields that may be expected from dwarf apples in well-cared-for commercial orchards," however, is another question. Professor Beach is not prepared to answer it in the affirmative. I greatly doubt it, as I also have my doubts whether the Doucin stock will soon become very popular.

Mr. Grundy Says:

THE POLITICAL FIELD

IN LOOKING over the political field in the great agricultural districts one is led to wonder where the farmer comes in. Some of the bitterest opponents of the Oleo Bill seem to come from sections in which farmers are in the majority. Are the farmers in those sections so blinded by partizan politics that they are unable to get together? Don't they care a cent for their own interests, or are they too busy milking cows, feeding calves and raising hogs to take a hand in plain politics?

In a few weeks the champions of oleo will be home, possibly candidates for reëlection. Seek them out, and have a social political chat with them, and get their views on matters pertaining to agricultural interests. When a public servant acts as some congressmen have in this oleo matter the farmer should keep in mind the fact that his vote is his own.

CORN CULTIVATION

It is impossible for any farmer to follow set rules in the management of his farm. Almost all depends on soil and weather conditions. Our most successful corn-growers keep the harrow going until the corn-plants appear, provided the soil is in harrowing condition. Sometimes a succession of showers after planting will make and keep the soil so wet that harrowing will do more harm than good. In that case one's plans must be modified or changed to suit conditions. The soil should not be worked when wet if it can be avoided; but if the surface dries so that a crust forms, that should be broken up at the earliest moment possible, for nothing can be worse for the soil or a crop than a dry crust on the surface. The harrow is the best implement for breaking up such a crust, and I would use it even if the corn-plants are an inch or two high, slanting the teeth backward far enough to prevent gathering trash. Then follow with the cultivators as soon as possible. Loosening a wet soil dries and aërates it, and keeping it loose and mellow on the surface prevents the escape of the subsoil-moisture needed by the growing plants.

Whether this season is going to be a wet or droughty one cannot be foretold with any degree of accuracy. Our object should be to keep the surface of our corn-land loose and mellow all the time, if possible. We must keep in mind the fact that when the corn-plant is a foot high the roots fill the soil between the rows, and to cut them off checks the growth. The outside shovels of the cultivator—those running in the middle of the row—may be set to run deep until the plant is a foot high, when all should run shallow. This is the best method of cultivation in both wet and dry seasons. If the rainfall is light this season we should be prepared to catch and retain in the soil every drop of it. Have the soil loose, so that rain will run in instead of off, and break up the crust as soon as the surface is dry enough to work and prevent the escape of the moisture we have caught. By doing this last season many farmers raised good crops of corn. A mistake many farmers made last season was in using cultivators that worked the loose soil between the rows toward the plants, leaving a hard-bottomed furrow midway between the rows. Where this was done there was a very light yield. The hard center baked and cracked, and all moisture escaped into the air.

SPECULATIONS.—A young farmer writes me that he was nipped in a little side speculation, and he wishes I would warn farmers against speculating in grain. He said a firm wrote him urging him to buy wheat for the rise that was then in sight. They assured him that wheat would go to a dollar before the first of May, and by snapping up a few thousand bushels at seventy-five cents he could make more in two months than he could in plain farming two years. He invested four hundred hard-earned dollars, and it is lost. Not long ago a nice-appearing man went into a little town and let a few men in "on the ground floor" of an oil company at twenty dollars a let. Failing to hear from the "promoter" concerning progress they investigated a little, and have learned that the company has no existence. One of the men invited to take stock said to me, "If this is the good thing that this fellow says it is, why does he have to go so far from home to sell stock? There's always plenty of men with money looking for good things, and they don't have to be peddled about the country." He is right. Oil and mining stocks and speculations in grain are good things to let alone. Ninety-nine times in a hundred the investor will lose every penny he puts into them. Then there's the commission firms that bob up like mushrooms in the night, and assure farmers that they have special contracts and a special line of customers, and can obtain a higher price for produce than any other firm, and they want the produce immediately. They offer inducements that often catch the unwary. One man I know shipped several hundred dollars' worth of produce to one of these fake firms, and lost all. He had bought most of it at top prices from his neighbors, and he had to pay for it. All these alluring side speculations are good things to let alone. Whenever I hear of them I am reminded of an old farmer and stock-breeder who was leisurely walking about at a fair viewing the sights. A young friend came to him, and pointing to a lot of gambling schemes run by fakirs, said, "Uncle Jim, I've a notion to take a crack at one of those, and speculate a little." Uncle Jim took him by the arm and led him to the stock-pens, and pointing to a young Poland-China pig, said, "If you want to speculate a little try a crack at that!" He bought it then and there, and years afterward declared that it was the most profitable investment he ever made.

All Over the Farm

TOP-DRESSING MEADOWS

THE Rhode Island station is doing work of great practical value in its soil and grass experiments. I have been studying its bulletins for years with much profit, and believe that they would be helpful to all who are interested in these subjects. Farmers must bear in mind that the results of any station experiments may not be taken safely by them as an absolute guide, as conditions vary too much to make this possible; but they set us to thinking, and oftentimes to going in the right direction for increased profit from our fields. Bulletin No. 82 of this station brings to us some conclusions that are rather startling, and while they are not entirely true for land remote from good markets, or probably for land of high fertility, yet they deserve consideration by very many hay-producers.

Experimentation with various quantities of commercial fertilizers, used as a top-dressing for meadows during a series of years, leads the station to say that "at present the great drawback to profitable grass culture in New England is the neglect to systematically top-dress mowing-lands and a general lack of knowledge of the relative quantities and absolute amounts of chemical manures to apply. If every one of the seventy-eight thousand eight hundred and twenty-four acres of grass-land in Rhode Island were treated in an intelligent and economical manner the increased revenue to the state would be enormous."

THE PROFIT GOTTEN.—The heaviest applications of fertilizers to grass-lands are the ones that have paid the most net profit, and nitrogen in nitrate of soda has seemed to be the most important element, though all three elements are needed. The plan is to top-dress late in April or early in May, and where the dressing was complete and liberal the yield was four and seven tenths tons an acre, making the receipts from one acre forty dollars greater than the cost of the dressing. The station does not commend the practice of using nitrate of soda alone on grass unless it is positively known that the soil is not deficient in phosphoric acid and potash.

The size of the application would alarm many of us if compelled to make it to our grass-lands, and yet why should this be so, provided net profit can be assured by former experiments on a small scale. Four hundred pounds of acid phosphate, two hundred and fifty pounds of muriate of potash and three hundred and fifty pounds of nitrate of soda gave the biggest profit. Without the nitrate of soda the yield was after the common farm style—one and one half tons an acre. With the nitrogen added the yield ran up to four and seven tenths tons.

Now bear in mind that this formula is probably incorrect for your grass-land. Your soil is not exactly similar. The lesson to be learned is that these small yields of hay are unnecessary, and the liberal top-dressings in the spring are effective if we apply just the elements needed. A moderate application of fertilizer yielded some net profit, but it was only when the plant-food was applied most liberally that the best net profit an acre was secured.

LOSS IN STORING HAY

What will well-cured hay in the field lose by storing in mow until spring? One fifth is a common estimate. The hay on three plots was sufficiently cured to remain in fine condition in the mow, and the next February the shrinkage was found to run from fifteen to twenty per cent. Where the yield was over four and one half tons an acre the curing was not so thorough as on plots of lighter yield, though sufficient for safe storage. So we may safely infer that twenty per cent is a safe outside estimate for shrinkage in the mow. Thoroughly cured grass will lose less, say one ton out of each six.

LIBERAL SEEDING OF MEADOWS

There is a great area of cold, wet land kept in meadow as much as possible. Some redtop should be seeded with the timothy and clover on such land. Redtop thrives pretty well in a sour soil, and heavy land is often acid. Timothy makes the preferable hay, and the station advises the use of a ton of lime an acre on acid land to help the clover and timothy. The nitrate of soda helps the timothy more than the redtop, partly because it, like lime, helps to sweeten a soil. For this class of land it is advised that we use in seeding fifteen pounds of timothy, seven and one half of clover and seven and one half of redtop an acre. The Rhode Island station teaching is that we should seed heavily, using some redtop where the soil is acid, and then feed the land heavily with annual top-dressings. Each one should test this on a small scale, bearing in mind the station's idea of a "liberal" dressing, and see if net profits may not be increased in this way.

COW-PEAS FOR PLANTING

There is much interest in cow-peas as a forage and fertilizing crop, and I am very sorry that the price of seed is so much higher than usual. Indeed, in the case of some early varieties, it is nearly prohibitive now. There are very few advertisements of seed for sale by growers, and the stock in the hands of seedsmen is small. It may be advisable this year not to broadcast or plant with a grain-drill using all the holes. Such seeding requires about five pecks of seed an acre. As good results can be gotten from drilling in rows two and one half feet apart, using one half bushel of seed an acre. I think as much feed can be grown by this method, but extra labor is demanded on account of two or three necessary cultivations. The high price of seed will make growers save seed more generally this fall, and there may be a return to old prices—a dollar, or trifle more, a bushel. One obstacle is the failure to invent a satisfactory machine for harvesting the seed, and one for threshing it. Some machines have been put upon the market in a limited way, but none has commended itself sufficiently to come into common use. But with a good yield of seed and the stimulus of present prices we can confidently count upon a supply that will bring prices down once more. The individual farmer of the North would do well to plant a patch for seed to insure a hardy strain for his own use. The peas should be drilled in rows for cultivation, and the crop may be flailed out.

DAVID.

GROWING PROTEIN

The extremely high prices prevailing during the season for all kinds of nitrogenous feeding-stuffs should lead farmers to consider quite seriously the subject of growing more of this class of feeding material upon their farms.

That it is economy to combine feeds in such a manner as to approach the standard established by scientific investigations can no longer be questioned by the intelligent farmer. He has learned that the nutritive ratio of the various feeds he grows varies materially. He knows that young, growing animals make better growth on a ratio of one to six than they possibly can on a feed with a ratio of one to twelve. But he has thought it almost necessary for him to depend upon purchasing mill-feed to balance up his timothy hay or his corn stover. So middlings and bran he buys, regardless of the price. But both of these have sold far above their true value for some months past. The thoughtful farmer says, however, that these feeds have a large manurial value as well as feeding value. This is true; but in feeding animals some of this manurial value is absorbed by the animal and lost to the manure. Then, too, our methods of handling the manure usually permit of more or less loss of value, estimated by experts at half the original value. How much can we really claim, then, for manurial value? Let us figure it out and see.

Wheat bran has a feeding value of about $13.76. It has a manurial value of about $12.19. The combined value cannot be over $20 a ton, and every dollar above that paid for a ton of bran is thrown away. If the manure is not well cared for bran is not worth $20.

Wheat middlings have a feeding value of $17.42 and a manurial value of $9.34, having much less phosphoric acid and also much less potash than the bran. The combined value is $22, and the farmer cannot afford to pay more even if he saves every pound of the manure in the most approved manner.

Using the same basis of calculation for good clover hay that has been used above we find that good clover hay has a feeding value of $11.20 and a manurial value of $8.35, or a combined value of $15.38.

Alsike hay has a feeding value of $12.34, manurial value of $9.47, and a combined value of $17.08.

Alfalfa hay has a feeding value of $12.90, manurial value of $8.42, and a combined value of $17.11.

Oats have a feeding value of $16.72, manurial value of $7.50, and a combined value of $20.47.

Peas have a feeding value of $17.34, manurial value of $10.85, and a combined value of $22.77.

All of these contain protein in good proportion, and if grown in sufficient quantity may be substituted for mill-feeds to a large extent.

If red clover does not do well, try Alsike or English clover or alfalfa. The finest hay I have ever fed was Alsike clover and timothy mixed. I shall endeavor to sow at least one field to Alsike and timothy each year.

I had my first experience with alfalfa some eleven years ago, but failed to get a good stand. The next year I secured a fine stand, and that piece has been cut three or four times every year since. The next year I failed to get a good stand because of poor seed. I sowed no more until last year, when I secured a perfect stand of plants, and at this time it promises a magnificent growth.

All kinds of stock like alfalfa either green or cured as hay. Even hogs will eat the hay quite greedily.

I would not advise any one to sow largely of it the first year; but every one should try it on a small scale, and learn the adaptability of his soil and the possibilities of this most marvelous plant.

By sowing oats and peas together as do our Canadian brothers we ought to be able to grow more of the protein foods, and escape the excessive prices charged for mill-feed.

By growing more clovers we would not find it necessary to use so much protein to balance up the corn and corn stover.

JOHN L. SHAWVER.

Alfalfa for a permanent green fodder crop has never yet been surpassed. Deep, dry, gravelly or sandy soil is what it wants, and some pains in making a start. The plant starts feebly. I once sowed a trial-patch on sandy loam, putting the seed in drills a foot apart, and cultivating with the hand wheel-hoe. But the slowness of growth discouraged me. If I had the right soil for it now I would plant it again and not get so easily discouraged. Cut it repeatedly while young. When once you have a patch, it is something worth having.

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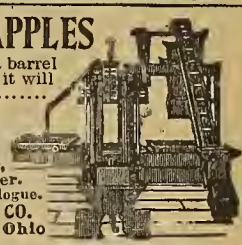

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The rose is one of the grandest of all flowers, and the collection of thrifty plants we here offer includes some of the very finest specimens. Principal among the roses in the collection is

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The collection here offered is made up of large, double-flowering Japanese Chrysanthemums, the direct offshoots of prize-winning varieties. This collection embraces all colors known to the Chrysanthemum family, and all shapes and forms, as incurved, recurved, twisted, whorled, ostrich-plumes, etc., also early and late bloomers. They are well-rooted plants and sure to grow. **Order Chrysanthemum Collection as No. 558.**

SIX DIFFERENT COLORS, AS FOLLOWS:

One deep golden yellow, one rose-pink with soft satin finish, one fiery red, one velvet rose with silky texture, one pure ivory-white, and one creamy-white showing a tinge of pink.

4 Beautiful GERANIUM Plants

The Geranium is among the most popular of all plants both for potting or bedding. More than this, they are exceedingly easy to grow and are free from insects. Collection here offered includes the latest and best varieties of this popular flower. They are unusually fine year-old plants, and with proper care are sure to grow. **Order Geranium Collection as No. 290.**

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One snow-white, one brilliant crimson-scarlet, one nankeen-salmon, one beautiful pink.

6 Fragrant CARNATION Plants

Carnations are the delight of every one who has an eye for the beautiful in flowers. Being unrivaled in their rich and refreshing fragrance, unequaled for diversity of colors, unapproached for daintiness and beauty of outline, it is not to be wondered at that next to the rose they have become the favorite flower among all classes. The collection we offer contains a fine variety of these exquisite plants. **Order Carnation Collection as No. 534.**

SIX DIFFERENT COLORS, AS FOLLOWS:

One yellow, one deep crimson, one rich scarlet, one white, one light pink striped with a darker shade, one bright clear pink.

CULTURAL DIRECTIONS.—Accompanying each lot of plants there are full directions for planting, care, etc., in order that the best results may be obtained.	GUARANTEE.—All of the plants will be large, healthy and well rooted, and will bloom the coming season. We guarantee them to be exactly as described, to arrive in perfect condition, and to give entire satisfaction or your money cheerfully refunded.

Postage on the plants paid by us in each case.

ADDRESS FARM AND FIRESIDE, SPRINGFIELD, OHIO

In the Field

The most valuable information for the practical farmer is that which will show him which is the most profitable crop that he can raise on his farm.

An increase of four bushels of wheat an acre was secured at the Tennessee Experiment Station by the use of sieves, so that only the largest, plumpest grains were used for seed.

Mr. Morris Evans, of the state of Washington, is reported as being the owner of thirty-six acres of irrigated land, of which twenty-five was planted to alfalfa. The first crop, of one hundred tons, sold for six hundred and fifty dollars. The second crop, of one hundred and four tons, brought four hundred and sixteen dollars. The third crop was estimated at fifty tons. This shows what can be done with alfalfa where irrigation is practised.

Not more than thirty years ago cotton-seed was thrown away as being worthless. The profit that is now being derived by cotton-growers from the sale of the seed for the making of cotton-seed oil, as well as oil-cake and hulls for feed for stock, is putting cotton-growing on a permanently profitable basis. The cotton-seed meal and the hulls after the oil is extracted from the seed are worth ten dollars and twenty-eight cents a ton, which is about the average price that is paid to the cotton-grower for the seed. Where the cotton-seed meal and hulls are used for fertilizing purposes in the South they are mixed as follows: One fourth meal and hulls, one fourth potash and two fourths acid phosphate, these proportions being varied to best meet the needs of the crop to be grown.

* * *

SWEET-CLOVER

A. O. B., Erda, Utah, writes: "I saw in the March 1st issue of the FARM AND FIRESIDE an item from friend Greiner headed 'Sweet-clover Seed,' in which he asks if sweet-clover is really good for anything but bee-pasture. My answer to his query would be decidedly in the affirmative. Cattle especially will take kindly to, and thrive on, it. A few years ago I cut and stacked in a neat, high stack about fifteen tons of it. The cutting was delayed until it was in full bloom, thus allowing the stalks to become large and apparently worthless. In the latter part of winter, when the stack had thoroughly settled, I was surprised to find these large, woody stems as brittle and sweet as any hay could be. The milk-cows, fed on alfalfa hay, preferred the clover. It must be borne in mind that feeding should not be attempted until the hay has time to sweat in the stack. As a fertilizer we have found nothing to equal sweet-clover on our alkali soil. Soil that produces nothing but salt-grass may be redeemed in two years by sowing sweet-clover. In our climate we need but to harrow the seed in without plowing, and if the moisture is sufficient the plant will bloom the second year, after which the root dies and leaves the soil soft and mellow. It is one of the best fertilizing-plants grown. To prevent going to seed, cut when in full bloom."

Correspondence and Comment

FROM INDIANA.—Thirty-eight years ago most of the land here in the central part of Montgomery County was covered with heavy timber, and the greater portion of it was under water. Now the land is nearly all cleared and well drained, and we can raise good corn crops in both wet and dry seasons. We raise all kinds of vegetables and an abundance of fruits. We raise lots of poultry. The hucksters come out for our produce, and bring our groceries. We have good gravel roads, a daily mail and the telephone. M. L.

Ladoga, Montgomery County, Ind.

FROM FLORIDA.—I am living on Sanibel Island, Lee County, Florida. The people here do not grow anything but tomatoes, which they ship to all of the Northern cities during the winter and spring. They are not very communicative about tomato-raising. The land has from six to ten inches of black, sandy soil on the surface, with a good many different kinds of sea-shells. A foot below the surface it is nearly all shells; underneath that it is pure white sand. One can dig a well any place and get water three to six feet from the surface. They plant tomatoes here in October, and gather the crop in January and February; and plant again in December and January, and gather the second crop in March, April, May and June. Sanibel Island is two miles wide, twelve miles long and four feet above the sea-level, and three miles from the mainland. J. S.

Sanibel, Lee County, Fla.

FROM MONTANA.—We had a remarkably open winter for this Northwest country, and stock of all kind look well. We had considerable snowfall, which is very beneficial to the country, for snow is our dependence for water to irrigate with. We cannot depend on rain. I am very much interested in the irrigation question now being agitated. I hope the government will build reservoirs, and control the water as it does the land, but fear there will be loop-holes left, through which speculators can fill their pockets from our government and would-be settlers. The building of these reservoirs would make it possible for thousands of acres of fine government land that otherwise will lay idle indefinitely to be homesteaded by good citizens with limited means. I read with a great deal of interest the proceedings of the grange, but am sorry to see the opposition to this movement by this organization. I was once a member of the grange, and felt a great interest in its work, and read every article in the FARM AND FIRESIDE with pleasure. My wife says I forget to do my chores when I get the welcome paper. Well, I cannot gainsay it, God bless her! for she is "boss" of the house and poultry-yard. The poultry department of your paper has given us a great deal of valuable information. I will now tell you what we did from January 1, 1902, to March 30, 1902. We have forty-three hens, mixed breeds. We marketed one hundred and one dozen eggs; used five dozen for cooking; have two hens that have hatched ten chicks each. The eggs sold averaged twenty-five cents a dozen in exchange for groceries, equivalent here to twenty-five dollars and seventy-five cents in cash. My good wife devotes a great deal of her time to her fowls. We feed soft wheat, corn and chopped wheat and oats, and all the bone they will eat.

Red Lodge, Carbon County, Mont. H. B. McL.

Gardening

By T. GREINER

TASTES DIFFER.—That is why seedsmen have to offer so many things and so many varieties.

EARLY MELONS.—A reader in South Dakota some time ago inquired about starting melon-plants (Emerald Gem) on inverted sods. I have never seen an earlier variety than Emerald Gem, and if we plant it in nice, rich, warm soil, in a good location, we will not get the first ripe fruit very much later than if we start the plants under glass and transplant. The check given to the plant in the transfer to open ground nearly always offsets the advantages of the earlier start. Sow the seed in well-prepared open ground as soon as that has become warm enough in spring—here about the middle of May.

HEALTHY ONION-PLANTS.—To prevent damping off or similar troubles from killing onion seedlings I know of no better plan than growing these plants in a layer of clear, sharp, new sand as we get it here along the riverside. This sand-bed, however, is only about an inch deep, and rests on a bed of old compost or well-rotted manure. Both bulb and stalk of each plant touch nothing but the clear sand, which is presumably free from infection. The roots, however, soon go down into the rich compost beneath the sand, and there find an abundance of plant-food to make a most rapid and strong growth. In transplanting, the greater portion of the roots below the sand are removed, not for fear of disease, but for easier and more convenient transplanting.

THE CABBAGE-MAGGOT

J. M. M., of Sterling, Ohio, complains of his annual losses of the cabbage crop caused by the attacks of the cabbage-maggot. With all the efforts I am making every year to prevent the attacks I usually lose at least a small portion of my early cabbages. But I manage to save by far the bulk of the crop. It is only the early cabbages which suffer from this source. A little bit of tobacco-dust thrown on the leaves and around the stems drives away the flea-beetles, and in most cases the fly which lays the eggs that hatch into root-maggots. Collars made of tarred felt (single ply) and placed close to the ground, with a close fit around the stem of the plant, are an almost sure protection, but it is a little trouble to make and adjust them. It is a good plan (and advisable for many other garden crops that are subject to insect attacks) to keep close watch of the plants, inspecting them every few days, and then to be ready to give the required treatment. When you see the first sign of the little eggs deposited on the stem near the ground remove some of the soil around the stem, and rub the eggs off, or give a thorough spraying with kerosene emulsion, or even a simple solution of muriate of potash, or possibly of saltpeter. Or apply some tobacco-dust. I have always believed that my plan of sowing radishes between or near the cabbages, to attract the fly and maggot, has had much to do with what success I enjoyed in keeping most of my early cabbages free from maggots. The radishes are often entirely destroyed by maggots, while the cabbages only a few feet from them are nearly clean.

Fruit-Growing

By S. B. GREEN

WHAT NUT-TREES WILL DO WELL IN IDAHO?—L. L., Boise, Idaho. The horticultural possibilities of Idaho are not well known. It is probable, however, that black walnut, butternut, shellbark hickory and chestnuts can all be grown in the best horticultural sections of Idaho.

SUN-SCALD IN CALIFORNIA.—J. B. F., Pomona, Cal., writes: "In this section we whitewash the trunks of the larger trees where the top does not furnish sufficient shade. For young trees just set in the orchard I would recommend wrapping with old sacking or paper till the top has grown to furnish sufficient shade."

SLUGS ON PEAR-TREES.—W. H. A., Chetco, Oreg. The slug which eats the soft portion out of the leaves of your pear-trees can be easily destroyed by spraying the foliage with Paris green and water at the rate of about one pound of Paris green to one hundred and fifty gallons of water. If you prefer, you could apply the Paris green dry with flour at the rate of one pound of Paris green to thirty pounds of flour, or one pound of Paris green to one hundred pounds of air-slaked lime.

GRAFTED PECANS.—P. J. A., Georgia. I doubt very much if the pecans which are offered you as budded or grafted have really been so treated. It is more than likely that the stalks were cut off in the nursery so as to give them the appearance of being grafted, and that what you are buying is simply the seedlings, which have a somewhat general appearance of the budded or grafted tree. There have been but few pecan-trees grafted or budded, as it is a rather difficult operation, and seedlings are generally more vigorous and profitable, and of course cost very much less. At present the best way of starting with these trees is to start with the seed, or else buy seedlings of the best paper-shell kinds. If an agent has sold these trees as having been budded or grafted, and they are not so, you certainly need not take them, and the chances are that you could make out a good case against him for obtaining money under false pretenses.

PIECE-ROOT OR WHOLE-ROOT TREES.—E. G., Pleasant Hill, Mo. In my opinion it does not matter whether you set piece-root or whole-root apple-trees. The discussion along this line I think has been quite unprofitable. I fail to see any difference in product or growth between a thrifty tree started on a piece of an apple root and a thrifty tree started from a whole root by grafting at the crown. I do not believe it has any material effect upon the subsequent growth of the tree except in the nursery. What you want, and what all growers should want, is good, thrifty, vigorous trees, and it matters very little how you get them, provided they are root-grafted for general use. As for the best age at which trees should be set in orchard I think as a rule that best results follow from setting the trees when they are two years old, provided they are thrifty and vigorous, but they should not be more than three years old. Some of our very best orchardists plant one-year trees.

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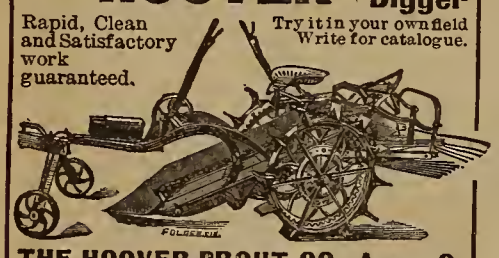

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A SPRING brood of pigs, to be marketed when eight months old in late fall, cannot be raised with much profit in pens unless there is a supply of milk or kitchen slops. Some pasturage is required for good profit, and nothing excels red clover. Straight grain-feeding in pens makes the grain-bill about as large as the receipts from the hogs when sold, and the ration must be well balanced by use of middlings or other protein feeds in the place of corn to keep the pigs healthy and growthy. But a clover-pasture does away with the necessity of much purchased feed if there is a farm supply of corn. The clover is rich in muscle-making elements, and is cooling to the system, permitting the feeding of some corn with good effect. It is a mistake to think that pigs will do their best on clover alone. It is too bulky a feed, and some grain should be fed regularly. There must be an abundance of fresh water.

For rapid and cheap fall growth of pigs nothing equals cow-peas as a feed. The crop should be ready for them to begin harvesting about September 1st. A little corn should be fed to them in the pea-field, and later they should be rounded off with corn alone. Under ordinary farm conditions this plan gives cheap pork, and while the ration is not balanced all the time as nicely as the scientific tables call for, it gives good growth, promotes health and affords a chance for net profits. D.

AS THE TEAM, SO IS THE FARMER

It is true that there are occasional farmers who are in the main successful and good, honorable members of their vocation whose horses are a discredit to their owners and an eyesore to the public. But it is much more generally true that a progressive and energetic farmer can be picked out by the prosperous appearance of his team. A farmer may be struggling with debts and mortgages and be quite unable to provide himself with fine turnouts and trappings with which to set off his team when driving to market or church, but the team itself in nine cases out of ten will declare the owner's thrift and energy or lack of it. The intelligent, thinking farmer well knows that his horses are no small part of his productive capital and equipment, which to be of greatest value must be well nourished, healthy and full of reserve strength. No other line of business in which horse-power is so largely used is so variable in its demands for horse-labor as that of the general-purpose farm. In consequence it is well-kept and well-cared-for teams which are able to stand the strain without harm when, as is often necessary, the work of two days needs to be crowded into one.

The condition of the harness and tackling disclose the farmer in the fitting, oiling and being kept free from irritating and abrading qualities. Horses thus considerately and humanely treated soon learn to appreciate the extra care and comfort, unless previously spoiled, and will cheerfully give more and better service to the users, and at the same time accomplish a given amount of work with greater economy than those overworked, under-fed and generally mistreated.

The farmer who is considerate of his team's welfare, either thorough motives of pride, economy or love of the animals themselves, is very much more likely to make a good citizen and parent than the one who strives mistakenly and unfeelingly to strain the last fraction of work and power from his animals at the least expense of care and sustenance. B. F. W. T.

CALVES AND SKIM-MILK

A farmer asks, "Can I raise four calves from the milk of four cows?"

The answer depends largely upon circumstances. If the farmer takes the milk to a cheese-factory to be made up, and gets back only the whey, he must depend to a great extent upon grain to raise his calves. If the milk is put through a separator on his own farm, or taken to a creamery which gives him back the skim-milk, there is no doubt that with proper care and feeding some grain he can raise his four calves from four cows. How?

Here is the experience of a practical farmer on this question. He begins when the calf is not more than two weeks old to use some skim-milk in the calf's ration. Up to this time the calf has been given sweet milk warm from the cow, so that the animal has gotten a good start in life. It has by this time learned well how to eat. It will take anything given it with a relish. The calf by this time is eating say two quarts of milk. Now a pint of the sweet milk is dropped and its place taken by an equal quantity of sweet skim-milk. For a few days the ration is held there. Then a little more skim-milk is added to replace a like amount of sweet milk. So the change is gradually made until at the end of ten days the calf is taking all skim-milk.

At the same time that this farmer begins to use the skim-milk he begins to give the calf a slight ration of bran, of wheat, or of bran and oil-meal mixed. At first this is dropped in the bottom of the bucket in which the calf is fed while yet there is milk enough to moisten the grain. The calf soon learns to lick the bran. Some men have a way of putting the grain into the milk at first, stirring it well. This is not as well as to follow the first plan, for then the grain is gulped down and becomes a source of irritation to the stomach. In a few days the grain may be put into a little box after the calf has had his milk, and eaten dry. The ration may be increased until the calf is eating twice a day one half pint.

Still another thing this practical farmer does. He begins to place a wisp of bright hay in a crate where the calf can reach it. Often calves not more than a week old will begin to nibble at this. Nothing in the world is better for the calf than this. A calf that will eat hay can be regarded as immune from scours. A little longer and the calf will drink water, but should have milk as long as possible. As the milk drops off the grain ration should be increased. So the problem may be solved. E. L. VINCENT.

SCOURS WHEN DRIVEN.—C. E. P., Sheldonville, Mass. If your mare begins to scour or physic as soon as hitched up for a drive, or rather as soon as exercised enough to get a little warm, you are probably in the habit of hitching her up immediately after she has consumed a heavy meal. Do not do this, but allow her about two-hours' rest after each heavy meal before you call on her for work or exercise, and her digestive powers—perhaps not at once, but very soon—will show a decided improvement. Besides this, drive at a slow gait for at least the first mile.

BLOATS EASILY—SORE BETWEEN TEATS.—A. H., Nevada City, Cal. If your cow bloats easily (suffers frequently from tympanitis) there are two possibilities: Either her digestion has been impaired, is weak, or she receives improper food—that is, food that has a great tendency to ferment, is difficult of digestion, or has been spoiled. In either case a change of diet and to feed only such food as is perfectly sound, is comparatively easy of digestion, is not in any way spoiled or decayed, and is not contaminated with any fungous growth, would be advisable, and would gradually restore the process of digestion to a normal condition.—Concerning the sores between the teats, apply to them once or twice a day a mixture of lime-water and olive-oil, equal parts.

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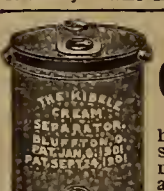

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Public Opinion is a 32-page weekly magazine, giving over 1,700 pages of reading matter every year and over 1,000 illustrations, including reproductions of cartoons. It is a newspaper of newspapers, a review of reviews, a magazine of facts and discussion, covering all sides of every question of the hour, whether political, social, religious, educational, scientific, financial, literary or artistic. *Public Opinion* takes you around the world every seven days. The best from 3,000 dailies, weeklies and monthlies will be found in every issue of *Public Opinion*.

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SPRINGFIELD, OHIO

Live Stock and Dairy

A GENERAL-PURPOSE BARN

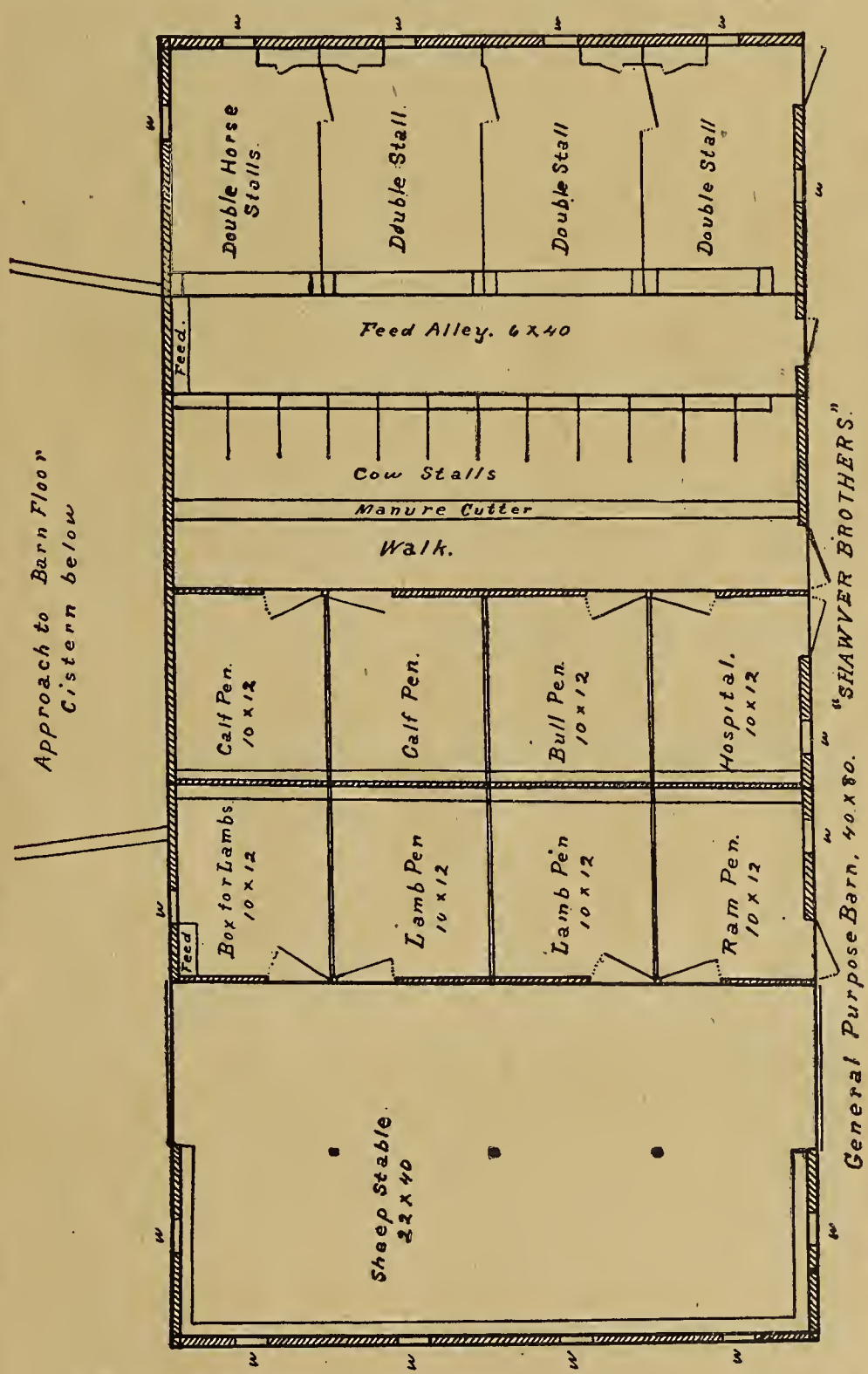
WHAT was a few years ago considered a large barn is to-day considered a small one. The farmer who built a forty-by-sixty barn in 1870 was considered fully up to date, but it is no uncommon thing to find barns eighty, one hundred, one hundred and twenty and even two hundred feet in length now.

All stock and provender must be safely housed ere winter sets in or the farmer does not feel that his harvesting is completed. He does not sleep well. He has troublesome dreams. His stock does not thrive well, and more feed is necessary to keep an animal in good flesh.

We present the plan of a general-purpose barn of moderate size—forty by eighty feet. It will accommodate eight horses and colts, twelve cows, one hundred sheep, besides ample accommodations for young stock.

It may be built near a bank, and very little grading be necessary, or it may be built on level ground, and retaining-walls erected and grading done to reach the main floor. In either case, unless good wells or springs can be depended upon for an abundant water-supply, a large cistern should be constructed under the approach. This not only saves grading, but gives one sufficient fall to enable him to arrange watering-tanks anywhere in the basement as well as about the barn-yard, and enables one to have a complete system of water-works about his barn at minimum cost.

Provide windows in abundance wherever possible rather than any system of latticework or shutters. The windows may be made to open horizontally, and



thus give just the amount of ventilation the season demands. Gauze wire may be placed over the windows to keep out the flies during the summer months.

The superstructure has a large double drive-floor thirty-two by forty, with a single bay sixteen by forty on the east end and a double bay thirty-two by forty on the west end. One of the floors may be filled with hay, grain or fodder, as occasion may demand.

Do not go to the expense of using battens or tongued and grooved siding if you must, then go to work and place in a lot of windows or shutters, through which wind, rain and snow may blow and ruin your hay or grain and cause your timbers to decay. Do not place costly ventilators on the comb. For ventilation use the gable device or the galvanized-iron ventilating-flues, and for light place a row of sixteen-by-sixteen windows set diamond-fashion just beneath the plates. This looks much better, and has none of the faults of the old-style ventilators.

In all your building let comfort and convenience receive first attention as matters of first importance. Afterward look after the symmetry and neatness, but always remembering that attractiveness without convenience in a building is money thrown away.

A plain barn well painted and kept in good repair, with neat surroundings, is always more presentable to the eye than a gaudily finished barn with unkept surroundings.

JOHN L. SHAWVER.

One of the best general-purpose barns in Ohio is that of A. R. Morse in Crawford County. It is eighty by one hundred feet, and is arranged for comfort and convenience in every detail.

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Muscoda, Wis., Feb. 1, '02. Dr. B. J. Kendall Co., Gentlemen:—Please send us your book called "A Treatise on the Horse and His Diseases." I bought one bottle of your Spavin Cure last year and cured one Spavin and one Splint with it, without leaving a mark. Yours truly, Harry Viktora.

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1902

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Free Pass to Washington & return Send 2c. stamp. Address: R.R. Ticket Dept., National Tribune, Washington, D.C.

$1,500.00 Cash Prizes

to be awarded in the great contest described on Page 19.

SHOEMAKER'S BOOK ON POULTRY

And Family Almanac for 1902. 160 pages 120 engravings; the finest work of its kind ever published. Gives recipes for making condition powders; remedies for all diseases of fowls; plans and diagrams for building poultry houses; tells you how to raise chickens profitably; gives description with illustrations of 48 leading varieties of pure bred fowls; also

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and poultry supplies at lowest prices. It is an encyclopedia of chicken information, worth many times its cost to anyone interested in poultry. You positively cannot afford to be without it. Sent postpaid, on receipt of price, 15 cents. Address,
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and how to get it is told in GLEANINGS IN BEE CULTURE, a handsome illustrated semi-monthly magazine, employing the best experts on the subject. Sample and valuable book on Bees and Bee Keepers' Supplies free to all who mention this paper. The A. I. Root Co. Medina, O.

$260 PER MONTH handling the PERFECT EGG PRESERVER. Used by farmers, poultrymen and produce dealers. Address with stamp. PERFECT PRESERVER CO., Duffan, Tex.

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DEATH to LICE on hens & chickens. 64-p. Book Free. D. J. Lambert, Box 303, Apponaug, R.I.

LIGHT BRAHMAS. Illustrated Circular Free. F. R. MOELLER, 65 Freeman St., Newark, N. J.

Poultry-Raising

By P. H. JACOBS

ASHES AND HEN-MANURE

Ashes and hen-manure if mixed together before being applied to the soil result in a loss of ammonia from the droppings that greatly lessens the value. Put ashes on after the manure has been mixed with the soil; the ammonia will be absorbed by the soil and remain in it for the use of the crop. Wood-ashes make a valuable application to hasten decomposition in coarse manures, but absorbents should be used to prevent loss, or the manure applied at once on the land.

FEEDING GRAINS

An excellent plan to follow in feeding is to give the birds wheat one day, the following day oats, the next barley, and so on. A great deal of inferior grain is sometimes purchased for fowls, which is a mistake. It is a better plan to buy the grains separately, and then if it is the wish to feed the birds on mixed grains it can be easily done. Although it may seem more expensive to buy the good grain, it is in the end much cheaper. Corn should be given only in small quantities, and then only during cold weather.

BUY PURE BREEDS

Do not object to expending a few dollars every year for eggs from good stock, for every dollar so spent is ten dollars saved. It makes but little difference what kind of fowls you keep, from Bantams to Brahmas, or even common fowls, so that they are infused with new blood annually, though the better the breed, the larger the profit. The hens may sometimes be of any sort, but the cocks must always be from a pure breed. Breeding-up is one of the groundworks of success, and if this is adhered to the stock will gradually become more valuable, for good breeds, careful management and warm quarters always give satisfaction. Lack of vigor may often be traced to a failure to infuse new blood.

BANTAMS FOR CHILDREN

Every boy on the farm should be given some young stock to raise for himself, he to attend to the same, and be induced to take an interest in the progress of the young creatures. Nothing can exceed the interest a boy or girl will take in Bantams. A boy will thus early become fond of fowls and of farming, and will be more reconciled to farm-life when he is grown. The boy who leaves the farm for the city is the one who has never had any opportunities, and looks upon farming as a drudgery. Labor becomes a pleasure when there is something to strive for, and the early education of the boy on the farm should be by giving him an interest in something. All children love young stock, and pet them.

LARGE AND SMALL FLOCKS

There is a cost for labor when large numbers are kept, which is absolutely essential, while with small flocks of a dozen or thereabouts the item of labor is never estimated. The profit on a small flock is large because it is simply the difference between the receipts and expenses for food, much of which consists of waste materials and table-scraps which have no value, but such profits would be materially reduced if credit is given for labor. In large flocks the prevalence of contagious disease may inflict a heavy loss, and this liability of disease is due to the fact that the houses for large numbers are built more economically than for a single small flock, the house for which is made more comfortable because it is inspected daily. With a small flock the work of lice-destruction may be done in a few minutes, and the lice can be kept down; but where there are many poultry houses or apartments lice can more easily secure lodgment and rapidly multiply before the poultryman becomes aware of the fact. The proper way to begin is to use small flocks and increase the number of fowls every year. In that manner experience will assist, and the liability of mistakes will be lessened.

SELLING BY QUALITY

It is probable that if eggs were sold by the pound there would be more care given the fowls and a greater interest taken in the breeds of poultry. The best hens are not always the ones that lay the largest number of eggs, though they may give a greater profit under the present system of selling. A hen that lays ten dozen eggs a year, weighing twelve eggs to the pound, does not really perform as much service as one that lays nine dozens, weighing eight to the pound. Selling by weight should enable the hens that lay fewer, but larger, eggs to give the larger profit. Farmers complain that while eggs are quoted at high figures the prices received by them are small. The fact is that the farmer gives no attention to selling the produce. He ships it to a commission-merchant and takes all the chances. The farmer is also careless in regard to the manner of shipping. He crowds fowls into small coops, does not assort the eggs, and sends good and bad produce in the same lot. Consumers would cheerfully buy from the farmers if convinced that the farmers did not buy from others. Any farmer can build up a trade for his eggs, milk and butter, at good prices, if he will convince the buyers that he has fresh and good articles to sell.

Early-laying Pullets.—I noticed an article in the Farm and Fireside advising hatching pullets early. A neighbor had a hen to hatch ten chicks last June, eight being pullets. They began to lay in November, and they have layed regularly since. They are White Leghorns. G. E. K., Eola, Ill.

Enlarged Crop.—H. L. R., Nashua, N. H., relates that his hens have enlarged crops, not crop-bound. It is probably due to heavy feeding, causing the crop to "bag," as the term is used. There is no remedy.

The Best Breed.—L. F. L., Monteithville, Va., desires to know the best breed for laying. There is no "best breed," as each breed possesses advantages of its own, some thriving and laying under conditions not suitable for others.

Eggs Not Hatching.—M. C., Blacksburg, Va., desires to know why eggs in his incubator failed to hatch, though containing chicks. The cause is due to the eggs, as some of them may have been laid by immature pullets, fat hens or inbred hens.

Feeding Lime.—Mrs. J. B. R., desires to know the best way to feed lime to fowls. Ground bone, animal-meal or cut green bone are excellent for providing lime. It is not necessary to feed lime itself, as the food can supply all that is required.

Sleepy Chicks.—N. A. S., Kingston, Ga., states that young chicks thrive well until about ten days old, and then appear sleepy and droopy. The cause is due to lice, especially the large pests on heads, necks and bodies. Anoint hen and each chick with a few drops of melted lard, or use the advertised lice-killers.

Incubator-hatching.—"Subscriber" desires to know if eggs should be removed from an incubator when cooling them; also should the thermometer be allowed to fall below seventy-two degrees when eggs are cooling. The eggs need not be removed, and may cool at a lower temperature. It would be well to closely follow the directions sent.

New Patterns

Splendid New Fashions for the Readers of the Farm and Fireside

These patterns are in addition to those on Page 20, and are offered on the same terms. See offers on that page.

No. 3770.—Ladies' Tucked Waist. 10 cents. Sizes, 32, 34, 36, 38 and 40 inches bust.
No. 4075.—Ladies' Five-gored Skirt. 10 cents. Sizes, 22, 24, 26, 28, 30 and 32 inches waist.

No. 3913.—Ladies' Fancy Blouse. 10 cents. Sizes, 32, 34, 36, 38 and 40 inches bust.
No. 3881.—Ladies' Five-gored Skirt. 11 cents. Sizes, 22, 24, 26, 28, 30 and 32 inches waist.

No. 4059.—Ladies' Wrapper. 11 cents. Sizes, 32, 34, 36, 38, 40 and 42 inches bust.
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AFTER FIFTY YEARS OF SCIENTIFIC STUDY AND EXPERIMENTATION DR. J. M. PEEBLES HAS PERFECTED A TREATMENT THAT PROMISES HEALTH TO ALL

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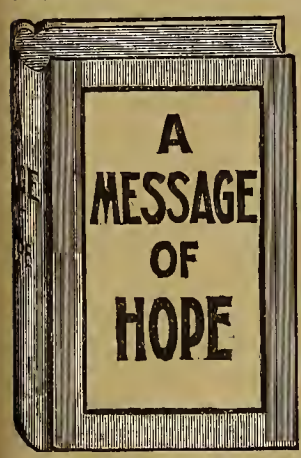

In order to reveal to suffering humanity the great discoveries he has made, and to explain to them his wonderful method of curing the sick, the Doctor has written a book, entitled **"A Message of Hope,"** which every one in poor health should have. This book gives you the key to perfect health, and fully explains how thousands of hopeless sufferers have been cured by this system after being given up by the regular physician. So sure is the Doctor that his treatment will cure even though all else has failed that he has instructed the Institute, of which he is physician-in-chief, to give every reader of the FARM AND FIRESIDE who is in poor health several days' treatment absolutely free, in order that they may know positively that it will cure them before they are put to any expense whatever. This offer is genuine, and done purely to convince sufferers that the treatment is all that is claimed for it. Mr. J. Schlipp, of 157 Gregory Street, Buffalo, writes as follows: "About a week ago my wife received the diagnosis and trial treatment from you. She has been benefited more by you in one week than by all the other doctors we have had, and we have had one constantly for four years. The results of the treatment are wonderful." It will cost you absolutely nothing to test this wonderful treatment for yourself. Write at once for it. Address Dr. Peebles Institute of Health, Battle Creek, Mich., Drawer N-7, stating your troubles, and the doctors will prepare a special treatment to fit your exact condition, and send you free of cost a full diagnosis of your case with their professional advice and their book "A Message of Hope."

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FARM AND FIRESIDE, Springfield, Ohio

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We Pay $20 a Week SALARY. No previous experience necessary. You can do it. For full particulars address THE CENTURY CO., Box 517, Oswego, Kans.

If afflicted with weak eyes, use Thompson's Eye Water

The Grange

By MRS. MARY E. LEE

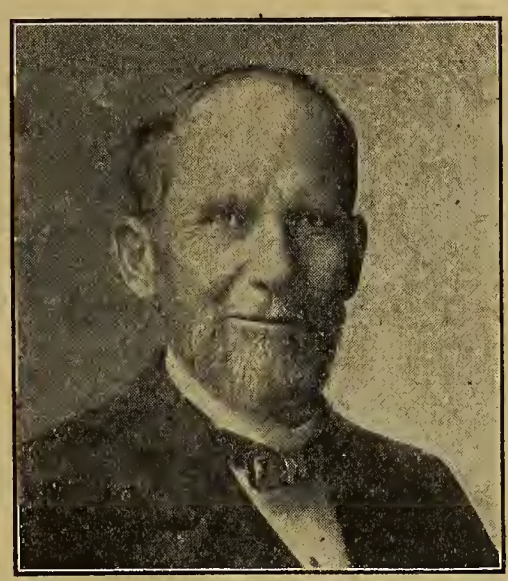
CURRENT COMMENT

In what way has your community contributed to the welfare of the world? It has done nothing of value! Then see to it that the same thing cannot be said a year hence.

Many another man beside Wamba the Jester has ingratiated himself into the esteem of the people by his ability to murmur "pax vobiscum." A little bit of learning and a big lot of cheek can command a high price. How we do love shams! How weak we are in the knees that we plump down on them so easily!

HON. S. H. ELLIS

We are glad to present to our readers the portrait of Hon. S. H. Ellis, one of the pioneers in grange-work. Indeed, to Ohio grangers the word "grange" is synonymous with the name "Ellis." In the exciting days of first organization; in the trying times that followed, when men dropped out because of lack of business acumen and sagacity; during those trying years that mark the history of every great enterprise, and in this latter time, when the grange stands as one of the honored institutions of our country, Brother Ellis was always true, faithful, earnest and zealous. Encouraging the weak, cheering the despondent and faint-hearted, instilling in others his own zeal, enthusiasm, and confidence in the ultimate success of the order, pouring oil on the troubled waters, quick in debate and repartee, wise in counsel, commanding respect for himself and the order he represented wherever he addressed the public or legislative body, this has been the service of Mr. Ellis for more than a quarter of a century. Nor is this all. He served with honor and distinction on the Board of Control of the Ohio Agricultural Experiment Station, was for years a trustee of the Ohio State University, and a member of the State Board of Agriculture. Ever since the organization of the grange Mr. Ellis has been officially connected with it. Ohio Patrons desire that he shall always be thus associated with the order. Mr. Ellis is one of the ablest parliamentarians, and his rulings are rarely questioned. The universal love and esteem in which Brother Ellis is held are their own eloquent testimony of a life nobly lived.



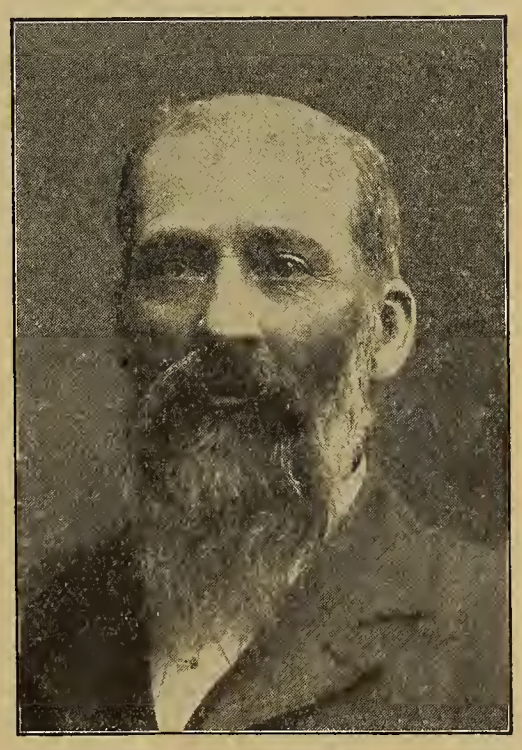
HON. S. H. ELLIS

OLEO LEGISLATION

As this is written the Oleo Bill has passed both houses, and now awaits the action of the House on the Senate amendments. This marks one of the hardest-fought battles the grange has waged. Its results will be far-reaching. The respect of the farmers for the grange will be augmented, and there will likely be a large increase in membership. The organized farmers have won the respect of, and what is of more importance, the fear of, kindred industries. The farmers need but to follow up their victory by other battles for pure food, equity and justice to make them a potent factor for good. There is no class of people so powerful, did they but know their power.

GUARD WELL THE GATES

Whenever popular sentiment is strong for an organization exceeding care must be taken that undesirable people shall not get into the order. The grange is too large with possibilities to endanger its reputation by letting in unscrupulous persons who would use it simply as a lever to attain personal ends. The grange is destined to become a mighty factor in our social evolution. Splendid as has been its achievements, it is but as a babe substituting walking for creeping. It looks with wonder and a growing comprehension at its own latent powers. It is ready to run, leap, dance. Be very sure that its power be used for that which is high and noble. Be very sure that its membership is made up of the very best sons and daughters of America.



HON. F. A. DERTHICK
Master of the Ohio State Grange

AGRICULTURE AT ST. LOUIS

The miserable showing the agricultural interests of different states made at the Pan-American filled the farmers with disgust. Will the experiment of failure be repeated at St. Louis? Several states have made appropriations. Others will no doubt follow. It now remains for the active, aggressive farmer to insist that only men of sterling worth, who are gifted with business acumen, and who will do the work they are appointed to do, be appointed as commissioners of agriculture. Our enemies are not slow to point the finger of scorn at us whenever we permit money which was appropriated for our use to slip through our fingers without making any adequate returns for the same. Let every wide-awake farmer register an effective protest against dead-beats and pauper politicians being placed on the board of commissioners. Each state has capable and conscientious farmers who would fill the position with honor and credit to themselves and their constituents. See to it that such men are appointed.

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Add boiling water and it is ready to apply.

Ask your dealer for it; if he doesn't sell it, write us for tint book showing combination of shades, a handsome celluloid bookmark, etc.

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Around the Fireside

ACROSS THE STREET

Across the street there lives a maid,
A jolly, teasing little jade,
With wanton hair and witching eyes,
And yet so staid and worldy wise
That if she deigns to send a glance
Across my way it seems mere chance
And quick withdraws in swift retreat
Across the street.

Across the street I sit and look,
Forgetful of my pipe and book;
I see her shadow on the pane,
And build me castles in far Spain.
And watch and wait, with patience rare,
Till, just as I would quite despair,
She looks from out her window-seat
Across the street.

Across the street hath come a change;
The window hath a tenant strange,
Who moves me to no rosy dreams;
My brain no more with castles teems—
What use have I for fancies frail?
The maid, as fits romantic tale,
Hath moved to make my joy complete,
Across the street.

—Truman Robert Andrews, in The Smart Set.

RURAL LIFE IN SYRIA

In one of his interesting foreign letters to the *Record-Herald* Mr. William E. Curtis tells, as follows, how the farmers around Damascus cling to the ancient customs:

"The irrigation systems along the valley through which the railway passes between Beirut and Damascus are ancient. They date back to the beginning of things, beyond the time when people began to keep records, before paper and books were invented, when few men knew their own language because there were no books to learn from and the art of writing was undeveloped. We do not know when irrigation was invented. Some historians attribute it to the Chinese, others to the Hindus, but if the human family originated in the Valley of the Euphrates the first irrigating canals must have been dug here. At least the same streams are now used, and the same methods for directing and regulating the flow of the water that were in vogue at the time of Abraham. There has been little change in the implements and habits of the farmers. They plow with the same sort of a crooked stick to-day as they did in the time of Noah, thresh their grain by driving hoofed cattle upon it, and winnow it by throwing it in the air to let the breeze blow out the chaff. It is extraordinary how the soil continues to bear. Its fertility is inexhaustible. These valleys have been planted with wheat and other grains for more than four thousand years that we know of, and yet they continue to yield rich harvests as long as water can reach them.

"The farmers do not live upon their land, but in contiguous villages. This custom dates back to the time when is was unsafe for them to do so, and when neighbors gathered together in little communities for better protection. Occasionally there is a case of robbery or kidnapping these days, and during the harvest season particularly the vineyards and the olive groves have to be watched. In some districts the government furnishes the watchmen; in others the land-owners organize for the purpose, and volunteer to assist each other. All these arrangements are reduced to a system, and follow the customs of centuries. The high walls about every house and every farm-yard indicate very plainly that live stock and other portable property are not always safe. But the farmers have more to fear from the government officials than from any other source. They are oppressed beyond all conception. The original tax upon farms is one tenth of all they produce, but the tax-gatherer sometimes seizes half of the harvest.

"Caravans of donkeys and camels still compete with the railroad, and are continually moving along the old highway between Beirut and Damascus loaded with all kinds of freight, grain, cotton, silk, machinery, fuel, poplar-trees, dry-goods, merchandise of every sort, but petroleum seemed to be the popular cargo. We counted hundreds of camels and donkeys loaded with tin cans of Russian petroleum, made at Batoum, and every case, for some reason or another, was marked with English words. It is bringing the old and the new together when you load a camel with kerosene oil.

"The Greeks formerly called this part of Syria Phoenicia, the 'land of palms,' because those trees were lovelier and more numerous here than anywhere else in the East. The palm has been accepted by all the Eastern nations as the highest type of grace and beauty. The columns of the temples erected in Egypt in the days of the Pharaohs, and afterward in Greece, in Palmyra, Babylon, Nineveh, and then in Rome, were modeled in imitation of the trunk of the palm, and the most beautiful of the daughters of Israel were named after the tree. The daughter of David and the daughter of Absalom were called 'Tamar,' which is a synonym for palm, and the name is still common among the women of Syria. You will find palm-branches used extensively in all the decorations of the Egyptians, and they were held as emblems of honor among the Hebrews, as the laurel among the Romans and Greeks."

AMERICAN VIRILITY

The will of the late Cecil Rhodes will continue to excite comment on both sides of the Atlantic for months to come. One peculiar feature of this remarkable document, however, is worthy of especial attention. It will be remembered that in defining the qualifications of those entitled to scholarships the testator laid greater stress upon "manliness" than upon mere erudition. In his scheme of a world-empire Cecil Rhodes realized that more depended upon virility and pugnacity than upon learning.

In this magnificent benefaction Americanism has at last received an unqualified recognition. We have had visits from observant foreigners, who through the medium of hasty and casual tours sought to appraise the temper and nature of the American people. Dickens found us strong, but coarse and vulgar. Kipling, a precocious stripling, with an eye for the ridiculous, echoed the same sentiment, but put them more forcibly, two generations later. Others whose opinion we valued less have come to look us over, and they have usually given their verdict with a sneer or frown. Our tall buildings, vast scheme of railroads and industrial activity have brought forth expressions of admiration, but as for the people—no patriotic American could repeat the foreign comments on his countrymen without a blush.

It is true that since the war with Spain and the "commercial invasion" of Europe our Old World cities have been deliberating on whether it would not be well to reverse their harsh judgment. But it took the discerning far-seeing Cecil Rhodes, a man who had never been in the United States, but who had seen Americans in South Africa, to place the stamp of approval on the character of Brother Jonathan.

But the American of to-day is but the product of his environment. He has courage and moral fiber, the ability to overcome obstacles. He has the conquering spirit of his fathers, the same spirit which Dickens overlooked amid the deluge of tobacco-spitting. Heretofore this element has been kept within the confines of the country, but with the advent of "expansion" the world has been compelled to take cognizance of it. It is this same sturdy fiber which Cecil Rhodes wanted to see mingled with the old Oxford conservatism to enliven the sluggish temperament of the Briton of to-day. F.

THE BELGIAN RIOTS

To understand the recent riots in Belgium it is necessary to remember the condition of suffrage in that country. In 1893 a large party led by the Socialists forced the government to grant what was nominally universal suffrage, the minimum age being fixed at twenty-five years. The new law, however, gave to certain classes supplementary votes; thus two additional votes were given to married men having children, one was given to those who owned a certain amount of property, and two again were given to graduates of various institutions. The Socialists have been fighting bitterly ever since these provisions, and the struggle has been made more implacable by the wide-spread hostility toward the "Clericals." A bill to do away with the supplementary votes is before the Belgian Parliament, and the feeling on the matter runs very high.

The first act resembling overt violence was on April 9th, when King Leopold was almost mobbed at the railway-station by a crowd of Socialists. The meeting was accidental, although a correspondent of the London *Times* declares that a plot existed to take the life of the King at this time. The Socialists had collected at the railway-station to bid farewell to the members of a delegation from Spain, who had come to Belgium to participate in the demonstrations. The Spaniards were informed by the police that they must leave Brussels, and they chanced to be at the station escorted by Belgian friends when the King arrived from Biarritz. On seeing him the crowd raised the shout, "Long live the Republic! Long live universal suffrage!" Red flags were raised, and the King was disagreeably jostled. Later in the day one thousand Socialists held a meeting at the *Maison du Peuple*, and afterward marched through the streets smashing windows, firing revolvers and creating disorder generally. The next day the rioting continued, and was only controlled by repeated charges of the police and mounted gendarmes with drawn sabers.

The most prominent persons in the riots belonged to the so-called Society of Young Socialist Guards, of whom M. Volkaert is the president. A warrant was issued for his arrest. The disturbances were continued even in the Chamber of Deputies, when the Premier, Count de Naeyer, alluded to the recent event in violent language, and declared that the aim of the Socialists went beyond the mere passing of the revision bill to "the dethronement of power and the triumph of revolution." He was interrupted by the deputies of the opposition, who became so outrageous that ushers had to be summoned to preserve order.

On Saturday, April 12th, the rioting in the streets became more violent than ever, and for the first time the gendarmes fired into the mob with loaded rifles. Before this they had only used their swords and revolvers, the latter being loaded for the most part with blank cartridges. On Saturday they used their Mauser carbines, loaded with what are called "strike cartridges," which contain balls, but minor charges of powder. The conflict was in a narrow street, and when the rioters scattered several bodies were left on the ground.

A general strike was ordered in order to help the Socialists in their determined efforts to force the revision measure through Parliament. S.

The Housewife

PLAYIN' PEEK-A-BOO

BY MAUDE E. SMITH HYMERS

Well, now, who'd thought that Spring would come
With such a glad surprise?
It makes a feller ketch his breath
An' sorter rub his eyes!
Of course, we know the almanacks
A month or so ago
Hed writ' it down that she was due
'Long with the ice an' snow.

But still the winter lingered long,
An' 'cause the weather matched
I filled the coal-bin up ag'in
An' hed my flannels patched.
Then Spring jumps out so sudden-like
She took us unawares—
Like little Dolly, bless her heart!
Comes rompin' down the stairs.

A little, blue-eyed, prattlin' thing,
She'll hide around a spell,
Then jump at grandpa sudden-like,
An' laugh to hear me yell.
So Spring's been playin' peek-a-boo
Behind old Winter's skirt,
A-peepin' out, then drawin' back,
Jest like a little flirt.

Till when we'd got discouraged-like
An' settled down to wait,
A-playin' like we didn't care
That Winter stayed so late;
Spring jumps out with a sunny laugh,
While we in wonderin' maze,
Find all the earth and all our hearts
Warmed with her winsome ways.

TRUST THE CHILDREN

THERE was once a little six-year-old girl who had the habit of telling wonderful stories of things no one but herself had ever seen or heard.

"As I was walking along," she said one day to her mother, "a golden egg dropped out of a tree and fell down upon the stones. The egg was broken to pieces, but a beautiful bird with wings of gold, and little stars for eyes, flew up before me, away into heaven, and sang, 'Little girl, I love you; I love you!'"

"Oh, what a beautiful story!" said her wise mother. "I will get a pencil and paper and write it out. When father comes home I will read it to him, and perhaps tomorrow you can tell me another."

This delighted the little girl, and when her father, who was also wise, clapped his hands and pronounced it an "excellent story" her satisfaction was complete.

The next day another story, longer than the first, and, if possible, more marvelous, was told, and again written out by her mother for her father's pleasure, and the daily story became a habit of the little girl's life. After awhile she learned to write, and was then able to tell her own stories on paper. And when she grew to be a woman and took up her life-work, which was that of telling stories altogether, she gave the credit to her mother, who had so wisely developed and cultivated her inborn talent.

A stupid and impatient mother might have said to her child, "That is not true; no such thing ever happened, and you have told a lie." Or a tender mother, who was yet stupid, might have said, "My little girl must not tell things that never happened, for that is telling a lie."

The world in which a little child finds himself is a great wonderland, not at all like our world. He has never measured and weighed relative shapes and sizes, and so things look bigger and more important to him than to us. If imagination and the creative faculty be latent within him, possibilities of things unseen and of actions unexperienced loom up before him, and he is not unlikely to make himself the hero of some thrilling incident that perhaps has no foundation outside of his own fertile brain.

Just here is the place where discrimination on the part of parent or teacher is plainly in order. The mistake is often made of taking it for granted that the child expects you to believe him, when the chances are that he does not.

Praise his little story, and encourage him to tell new ones, appearing meantime to consider it as told simply for your amusement, with no intention to deceive. Perhaps there is no one of us but that can point to some friend who has the faculty of drawing out the best there is in us. For the time being we are what that friend has made us, and we go from him happily conscious of the fact.

LILLA A. WHITNEY.

BATTENBERG SIDEBOARD SCARF

The popularity of this beautiful needlework carries it into all parts of the house.

This scarf is made of the heavy braid, interspersed with rings, and heavy butcher's-linen for the center. The pattern is showy and one composed of very simple stitches, so that it need not take long to complete it.

The chief work is in getting the braid neatly arranged upon the pattern, as great care must be taken to turn the sharp corners true and to make the curves well turned.

After basting on the braid go all over the inner edge with No. 500 linen thread, slightly gathering in the braid at the curves. As soon as a portion is finished baste over it a piece of white material, to keep from soiling. The filling-stitches can be altered from the given pattern if so desired. When laundered a little starch should be added to the rinsing-water.

INSECT-PESTS

Even the most cleanly housekeepers are at times annoyed by the various insect-pests, which in some unaccountable way not only find their way into the house, but take it, as it were, by storm—some by waging a most destructive war upon the household supplies, others directing their hostilities upon the inmates themselves—rendering life for the time being a burden.

Perhaps the most persistent of these pests, when once a foothold is gained, are the cockroaches. Indeed, it seems almost impossible to preclude all danger of their returning; but at least temporary relief from their ravages may be had, which is something. These insects not only devour both animal and vegetable substances, but they emit from their mouths a dark-colored fluid, which gives a disgusting odor to everything they pass over. They are nocturnal insects. One of the simplest and most effective methods of ridding a kitchen or other places of roaches is to place a tin basin with some molasses in the bottom on the floor. A piece of wood resting between the floor and edge of the basin forms a walkway, over which the roaches go to meet their just deserts. The slippery sides of the basin prevent their return. Thousands may in this way be caught during a single night. Rags dipped in the oil of pennyroyal, or fresh bunches of it laid in their most frequent haunts, will help to drive them off. Above all, perfect cleanliness must be observed.

During the summer in rural districts fleas often exist in such numbers as to cause both native and temporary sojourner to almost contemplate suicide. The odors of fleabane and wormwood are said to be detestable to the flea. Tusser thus extols the virtues of wormwood:

While wormwood hath seed get a handful or twaine,
To save against March, to make flea to refraine;
When chamber is sweeped and wormwood is strown,
No flea for his life dare abide to be known.

The problem of ridding our houses of flies has been solved by the inventors of door and window screens and the various "fly-papers;" and careless indeed is that housewife who neglects to avail herself of the comfort thus afforded.

The little ants which so often infest houses may be driven away by the free use of gum camphor. Powdered borax sprinkled about is also good. One of the best ways of expelling them is to mix two tablespoonfuls of molasses with one teaspoonful of tartar emetic. Put this into a small saucer, and set where ants have been seen. Let stand over night, and the surface will be covered with dead ants, while many more will have been frightened away.

Gum camphor sprinkled on hot coals, and the smoke allowed to fill the room, will expel mosquitoes.

KATHARINE E. MEGEE.

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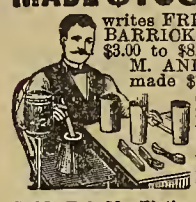

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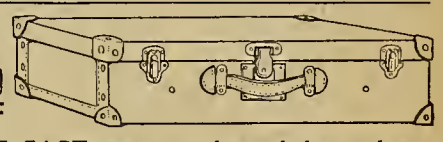

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California's Fruits and Flowers

By JANE LAYNG

IN SOUTHERN California vast areas which less than a quarter of a century ago were barren wastes of gray sage-brush or of prickly cacti now are blooming or fruit-laden orchards of peach, lemon, orange, apricot, plum, almond, cherry, nectarine, pear and apple trees. Yankee enterprise has by means of irrigation redeemed the desert and made it to blossom as the rose.

From whatever side this semi-tropical-fruit region is approached to-day the traveler by rail must reach it through dreary desert land, across which he must pass before he can hope to have the full splendor of southern California burst upon his view. The contrast between the desert just crossed and this garden of fruit and flowers is tremendous. The glory of California would be great in any case, even when compared with pleasant regions elsewhere, but brought so sharply into comparison with so opposite an extreme as the desert affords the effect is very striking indeed.

In February or March orange-trees bearing shining evergreen leaves and weighted with both green and yellow spheres of ripe and unripe fruit hanging amid fragrant, waxen white buds and blossoms greet the eyes of the new-comer. All that one had fondly imagined of delight in an orange orchard is to be seen save the carpet of grass upon which he had pictured himself reclining beneath the flowering, fruit-laden trees. No grass is there. Not a blade is permitted to grow in these neat, rowed orange groves; instead they are kept so carefully cultivated that one might as well sit down in a potato-patch as in one of these orange orchards. So much for the romance of the situation.

VINTAGE-TIME IN SOUTHERN CALIFORNIA

The Yankee spirits who made this land what it now is were not bent upon romantic ends. Every orchard to be seen proves this; for it has been found that the yield is more abundant and irrigation more effectual when the ground beneath all fruit-trees is kept like a newly cultivated field. Yet the perfume of these myriads of trees fills the air as deliciously as if enterprise were a thing unknown. The roseate beauty of peach and almond bloom hangs like a filmy pink cloud between man and the sunny heavens; and the drowsy hum of well-fed bees fills all the place in the sweet California springtime. Thus are the poetical and the practical elements blended there.

To know how delightful the spring can be in that Western world one must drive through one of the illimitable vineyards in this land of wineries. Hundreds of acres of low-bending vines send forth the peculiarly subtle odor of the delicate green grape-blossoms. It is as if these modest flowers sought by the fine quality of their perfume to atone for their lack of brilliancy.

With a lavish hand Nature spreads her wealth of spring flowers over southern California. Fruit-trees lift their soft burdens of pink and white. Flowering shrubs and trees from every clime are gay in unique blossoms of yellow, orange, lavender, scarlet and purple. The pomegranate in long hedgerows throws its scarlet, trumpet-shaped blossoms to the wind. Strikingly like the bloom of the Eastern trumpet-vine are these trumpets, but of a more vivid and brilliant red; while the fruit of the pomegranate among the flowers and leaves hangs like spheres of ivory, sun-kissed to pink on the outer cheek and filled with soft, juicy seeds, which are like scarlet jewels in an ivory case.

On the hillsides the yucca bears its proud crest of white flowers, towering as high as twenty feet or more—like a gigantic hyacinth with creamy bells. It is often called "Spanish bayonet," because of its long, sharp-pointed leaf-blades.

On the lawns and the house-walls the choicest roses mingle in a sweet and picturesque riot. Roses as fair and flawless as our Eastern hothouses produce are these; and their foliage is as perfect as one can imagine. In places one may see the Marechal Neil covering the side of a cottage, or perhaps it will be the rich Gold of Ophir rose, while the La France and the Duchesse are among the commonest and most profuse bloomers in southern California. No one ever failed of satisfaction in these queenly beauties.

But far surpassing all this bloom in brilliancy is the poppies' gold. In town every vacant lot is glorified by their presence, and far from the heart of the city they cover hundreds of acres in a flaming mass. Glowing, orange-hued poppies shimmering on their low green stems—always they are single and glossy, with the finish of the finest satin. These lovely silken poppies gleam from roadside and hillside in the same profusion as do the dandelions of the East. Viewed from a distance of several miles hundreds of acres on the foothills bestrewn with these golden flowers resemble nothing so much as a fire sweeping over the expanse of ground. Well is California named the "Golden State;" for when the Eastern states' skies in March and April are dark and leaden the nodding yellow poppies all but cover certain southern California regions. So must they have done in those early days when, as tradition has it, Spanish sailors nearing the California coast could see these vast fields of poppy splendor upon the foothills of the Sierras thirty miles inland! However exaggerated this folk-tale may be, the truth remains that these fiery flower-meadows are visible from great distances, easily visible at ten-miles' distance. True is it also that in riding through a large field of them one's eyes are dazzled by the strong reflection of unclouded sunlight upon the shining petals of these brilliant flowers swaying in the breeze.

Gradually the golden poppies vanish from the land, and the bloom fades from the countless orchard-trees. Fruit-time is near. From early June until almost Christmas the most delicious fruits follow each other in succession through all the intervening sunny months. No rain is expected between May and October or November; and indeed it rarely does come in that period. Under the influence of unclouded sunlight the fruits attain their wondrous perfection, irrigation being used for some of them at that time.

[CONCLUDED ON PAGE 20]

Sunday Reading

BETWEEN THE LIGHTS

"Dear heart, come closer while the light
Dies slowly in the darkening sky.
And, marshaled at the call of night,
The twilight shades troop softly by.

"I would not have you sorrow so,
Because it must be, soon or late,
That one of us, alone, will go
From out the light thro' Death's dark gate.

"For life at best is all too short
When measured by a love like ours,
And death is but an open port
To broader fields and fairer flowers.

"So, while the twilight shades troop past
And night and darkness come apace,
We know the dawn will break at last,
And always there is light some place."
—A. C. Ivins, in Ainslee's.

TRUTH FIRST

THE truth is worth more than the man. The more truly a man pursues truth for truth's sake, the more does he lose sight of himself in gaining sight of the truth. Many an investigator is more disturbed about his own priority than he is about the priority of the value of the truth. Few finer things could be said of any discoverer than what has been said of the eminent physicist Helmholtz, "He never indulged in one of those reclamations of priority into which scientific vanity is sure to be betrayed, but several times published notes to show that his own results were not so new as he and the scientific world had believed them to be." When the world is doing homage to one whom it acknowledges as its great master in science what grim delight must he find in reminding his admirers that the truth is first, even though it compel them to regard him as second! Yet this is the true spirit, not alone for the distinguished scientist, but for every plain, obscure man, woman and child. Truth first.—American Friend.

"THE MAN BEHIND THE GUN"

Certain things came to us out of the Spanish war. Came the stretching of the eagle's wings. Came fair islands in the Eastern and Western seas, "where every prospect pleases, and only man is vile." Came a host of interesting and perplexing problems—national, international, social, political, religious. Came Aguinaldo the slippery, whom, having not, we sought with diligence; but whom, having, we know not what to do with—Aguinaldo, the "white elephant," which we have somehow drawn in this curious lottery. Came finally the phrase at the head of this paper, which promises to live because of its fitness to live.

It is the explanation of the war's result. We whipped Spain not because we were bigger, stronger in numbers and resources; not because we had more and better ships, guns, powder, but because we had better men. The determining factor was the quality of manhood. We were victors not by virtue of more *men*, but of more *man*.

Quality rather than quantity; the weighing rather than the counting of Israel; the emphasis of that which uses the means over the means themselves. It was not the ox-goad which routed the Philistines, but Shamgar, who handled it. It was not the sling, but the deft-handed slinger, who brought the braggart of Gath to the ground.

"*That* the sword of Alexander?" said one to whom it was shown. "Why, I see nothing remarkable about that."

"Ah, but you have not seen the arm that wielded it," was the illuminating response.

It is this thought that lies in Mr. Garfield's oft-quoted remark that he would rather attend a college on a log, with President Mark Hopkins on the other end of it, than any university in the land without him. The life is more than meat or means; the man is a more important fact and factor than methods or instruments. In the last analysis it is always the man behind the gun with whom we have to reckon.

Now, *mutatis mutandis*, the phrase lends itself readily enough to Christian uses; and especially for the purpose of this paper to the uses of the young people's movement in the churches. Strip off the blue or the khaki, take away the guns, and silence the bugles. Close the atlas on the map of Cuba and the Philippines. Our concern is not with these. Yet are we all soldiers, enlisted in a war whose issues shall be decided, so far as the human is concerned, by just that which this phrase suggests—life, not things; men, not means. Sometimes we almost forget it. Great is organization! and we are its prophets. Something to be done? Go to! Let us organize; let us adopt a constitution; let us appoint committees three or nine; let us insist that these committees do their work as defined in this constitution. Behold the object desired! In the gearing of wheels there is the promise of the grinding of corn. Sometimes we seem to forget that a gun is nothing but a gun until it gets a man to use it. Sometimes we seem to ignore that which we all know right well—the fact that conscience must be behind committee, and effective self back of efficient society.

And it may be that this is one of the peculiar perils of this particular time. We are well over the initial stages of the young people's work. In the fresh burst of enthusiasm over a new plan a score of years ago everything went with a rush. The long-pent-up waters suddenly released carried current enough to turn all wheels. Organization seemed practically the all-sufficient solvent, panacea, instrumentality. We had only to press the button, and the constitution did the rest. We had only to drop a committee in the slot and take out a result. But that is past. "The tumults and the shoutings die." The young people's society is no longer a new thing. It has to-day no strange formula to conjure with. Its purposes, plans, methods, have been thoroughly exploited, and are fully understood. What now? The thought which our phrase suggests. That which shall save and perpetuate the young people's work, conserve what has been gained, and increase future results in both quantity and quality, is the clear, strong emphasis of the life that lies back of organization—the emphasis of "the man behind the gun."

Nothing new in this, of course. Simply an "Amen!" to what has been said times beyond number. Yet its repetition may be suffered on account of the important principle involved. The individual life is the unit of measurement, not the society or the constitution. The man behind the gun, the conscience behind the committee, determine efficiency and success. Colonel Roosevelt, with broken saber and disabled carbine, would have reached the top of San Juan Hill; Captain Irresolute or General Faintheart would not have mounted its first rise though equipped with the armory's best. "Your sword too short? Make it longer by taking a step forward," was the Spartan mother's admonition to her complaining son. That step was of more importance than another foot of steel. Your society is cold and formal? Your president is half-hearted and uninterested? Your committee is frivolous and inefficient? Your work is ineffective, therefore? Sad, surely; but not irreparable. You'll have to lengthen your sword by lengthening your stride. These things are the means and methods of your work. But something is more important than means and methods. Men and women. It is "the man behind the gun" that counts.—Doctor Wilson, in the Epworth Herald.

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What a Man Works For

By ADA BENTWICK STONE

Mrs. Kilder glanced at the clock as she hurriedly entered the kitchen. "Dear me, half-past ten and not a dish washed!" she exclaimed. "Nannie, stop reading and begin clearing off the table. I think you might have done it without having to be nagged.

"Well, anyway, I'm glad that strawberry-bed is weeded, even if it is Saturday and I had to let the housework go," she declared, as she washed the grime from her hands. "Nannie!" Her tone was so sharp that the twelve-year-old girl, doubled up over a book, threw it aside and arose hastily, yawning and stretching up her arms.

"Oh, ma," she cried suddenly, "the depot-carriage is coming. It has turned the corner."

Mrs. Kilder hurried to the window, stumbling over a bucket of apples on the way. "I wonder if it is that cousin the Burkes are expecting?" she mused.

"Why, they're coming here!" Nannie exclaimed. "Now, who can it be?"

Mrs. Kilder became rigid with apprehension as she gazed. "Oh, dear!" she wailed. "It's Milicent. I think it's awfully mean of her not to write and let me know!"

She snatched off her torn apron as she spoke and thrust it behind the lounge, shoved the cat's dish, and a partly eaten ear of boiled sweet-corn lying beside it, under the stove with her foot, while a chair, piled with the clothes she had brought in from the line the night before, she dragged into an adjoining room, closing the door on it. "Nan!" she commanded, sharply, "go and put on your shoes and stockings, and change that ragged skirt! Hurry!"

By this time the carriage had stopped at the side door, and Mrs. Kilder went to meet her visitor, smoothing her hair with her hands and drawing the front of her wrapper together on the way.

The sisters greeted each other affectionately, though there was a slight constraint in the manner of the elder, and a little more color than usual in her face.

Milicent's quick eyes took in everything as she crossed a corner of the untidy kitchen to the equally untidy sitting-room.

"I think I'll go right to my room, then I can change my dress and help you, Deborah," she said.

"It isn't quite ready," her sister objected; "but come along. I don't suppose there is any call for me to apologize for the way things look. Everybody knows that when a woman lives on a farm, and has outdoor work to do, she can't keep her house in apple-pie order, too. I'll take your valise."

There were rolls of dust on the lower-hall carpet and on the stairs, and when the blinds had been opened in the spare room a similar state of things was disclosed there.

The two sisters talked fast, Deborah making the bed, while Milicent exchanged her trim traveling-costume for a pretty shirt-waist and gray walking-skirt.

"Dear me, Milly, what an old maid you are!" Deborah laughed, as Milicent began arranging a white mull tie over her linen collar. "You won't look quite so fresh and band-boxy after you've been around in my kitchen awhile helping me dig out."

"Oh, this isn't my only one," Milly laughed back, "and I haven't forgotten how to wash and iron."

"It doesn't pay," Deborah declared, positively. "What difference does it make, anyway, how you look on a farm. I have clothes and could dress up and look as nice as anybody, but what would it amount to? A lot of extra work, that is all. It is altogether too much trouble."

"Ma, may I come in?" a voice asked; and on being told she might, Nannie opened the door a little bashfully and entered. She had put on her shoes and stockings, but a jagged rent showed in one of the stockings, and her skirt was ripped in the seam, while her hair, though newly combed and braided, had not been entirely freed from snarls, and was somewhat rough in consequence.

But Nannie was a pretty, attractive girl in spite of these drawbacks, and her aunt's kiss was so cordial that she was won to her at once.

"Milly, I sha'n't let you help me; you're too tired!" Deborah exclaimed suddenly. "You're as pale as a ghost. You just lie down on the bed and rest, and I'll fix you up something hot to drink."

"I—don't know but I will," Milicent answered, after a moment's indecision. "My head does ache fearfully. I hardly slept at all on the boat last night, and the long ride this morning was very tiresome."

When Milicent came down-stairs to dinner two hours later her brother-in-law had just finished wiping his face and hands on the kitchen roller-towel. He was a large, strongly built man, with a fresh complexion, light hair that curled a little, and very pleasant eyes. He wore no vest, and his shirt was much the worse for wear, being fastened at the back of the neck with a large safety-pin, and out at elbows, besides being exceedingly soiled. His overalls were also soiled and ragged, and one could see a bit of bare skin through a hole in his shoe.

"Well, well, Milly!" he said, as he shook her hand heartily, "you're the same little girl you were the last time I saw you—five years ago, was it? You look as if you had just come out of the top drawer," he added, regarding her admiringly and then glancing down at his own garments with a grimace of disgust.

The hired man slouched in after the rest were seated at the table—a taciturn individual, who kept his eyes on his plate and never spoke unless spoken to.

"You see I'm not making company of you," Deborah said, with an apologetic glance around the room and at the table. "They say bare tables are all the fashion, and I don't use the dining-room at all lately. It saves so many steps to eat in the kitchen."

Under each plate and beneath some of the dishes were napkins, ironed without sprinkling, apparently, and serving as a makeshift for doilies. The butter was partly melted and stuck all over the inside of the butter-dish, there was a large iron spoon in the dish of shell-beans, and the milk was contained in a dingy tin measure.

"Mama has some real pretty white table-cloths and napkins that papa gave her Christmas," Nannie volunteered.

"They're too good to use when you are all such cases for spilling things," Deborah said. "I should have to have a clean one every day, and goodness knows my washings are large enough now!"

"You might hire your washing done," suggested her husband.

"Yes, I might spend all you make on the farm, hiring things done," his wife rejoined, a little tartly. "I was brought up to be saving. 'Save the pennies, and the dollars will take care of themselves,' my mother used to say. If you had some wives I could name I guess you'd be just a trifle poorer than you are now, Sam Kilder. It isn't every woman that is as economical as I am, or that helps her husband in his business as I do."

"Yes, yes," said her husband, soothingly, "you are an out-and-out help-meet, and no mistake. By the way, I noticed as I came along that you have been at work in the strawberry-bed. It looks fine."

"Doesn't it!" said Deborah, mollified. "I'm going to tackle that hedgerow next."

"Oh, that's too hard for you," Sam protested.

"I know it's hard, but I am strong, and it needs doing. Besides, you haven't time to attend to it."

Milicent helped do up the dinner-dishes, and then at Deborah's invitation went out and sat on the wall and watched her pull weeds, and gnaw off bushes with a bill-hook. Nannie hung around for a while, then started off to visit a girl neighbor. Every little while Deborah would straighten up to note the effect of her labors and wipe her red and perspiring face. "You have no idea what an amount of work I've done on the farm this year," she said, proudly.

"Hasn't Sam had a man to help him all the time?" her sister asked.

"Yes; but there's enough for a dozen to do."

"I should think there was enough for one at least in the house," Milicent said, drily.

"Well, I suppose there is, but that isn't so necessary. I get them three square meals a day, and that is all they can expect."

Milicent made as if to speak again, then shut her lips tightly and said nothing.

On Monday morning Milicent started in with the heroic resolve to do the housework, including the washing, as it should be done; but dust and dirt and disorder were so all-prevailing that the task seemed hopeless, and after finishing the ironing Tuesday afternoon she gave it up and went out to see Deborah rake stones in the garden.

After this she did little more than wipe dishes, take care of her room, and do some mending. The rest of the time she spent in reading or taking long walks.

At the end of a week she was so homesick that she decided to go home, though both Deborah and Sam tried hard to persuade her to stay longer.

Deborah helped her pack her valise, then advised her to lie down for a while in preparation for her journey. "And while you are resting," she said, "I believe I will go and gather some pears on that tall tree back of the barn. There'll be just time before harnessing to carry you to the depot."

It seemed to Milicent as if she had but just dropped into a doze when she awoke very suddenly to see Nannie standing over her, wringing her hands and sobbing convulsively.

"Why, Nannie, what has happened?" she cried, springing up.

"The ladder slipped, and mama fell, and she can't walk," Nannie managed to explain.

When Sam came home half an hour later with the doctor—and a horse covered with lather—it was found that Deborah had broken one leg and dislocated the other ankle.

"You won't go home to-day, Milly?" she pleaded.

"I shall stay until you are able to be around the house again," Milicent answered; and Deborah cried, the first time since her accident.

The next few days showed Milicent what a lovable character her sister was, and in what affectionate regard she was held by her husband and daughter. They could not do enough for her comfort, and the tears would start to their eyes at the thought of her sufferings.

But withal Deborah Kilder was very human. She had had, during that first week of her sister's visit, a little jealous feeling, of which she was hardly conscious, because Milicent always looked so trim and neat. It seemed somehow like a silent rebuke of her own carelessness. "Milicent thinks I neglect my personal appearance and my housework," she said to herself. "Now she will see how much there is to do, and she may find she hasn't any more time than I had to prink and be particular."

When the signs of this failed to appear Deborah was vaguely disappointed—though she would have indignantly denied having so unworthy an attitude of mind—and her disappointment found expression in a slight irritability. She had an uneasy feeling that perhaps, after all, Milicent's disapproval had been just.

Little by little Milicent had cleaned Deborah's room—dusting one day, wiping off the straw matting with a damp cloth another, tacking screens into two of the windows that Deborah had not had time to attend to all summer, clearing off stand and bureau and chairs, till the room was in order.

Then one afternoon—it was Deborah's birthday—she came up-stairs with two pretty white dressing-sacks over her arm. "My birthday present to you," she said. "I've got the work in hand now, so I am going to keep you looking nice."

Deborah thanked her coldly, and submitted to the fixing up, which included waving her hair with the curling-tongs.

When, according to custom, Sam came up to see her in the late afternoon before beginning on his chores he gave a start of surprise. "What have you done to yourself?" he asked. "You look so nice I should hardly know you." Then he rested his hand affectionately on her head, and, coloring a little, bent down and kissed her—which was not according to custom, for he had someway got out of the habit of being demonstrative.

"It's all nonsense Milly spending so much time over me and this room!" she exclaimed, impatiently. "She had much better go outdoors and help you, if she has any time and strength to throw away."

"Now, it seems to me time well spent; and I don't need her outdoors, you know," he answered, pleasantly, though a perplexed shadow had fallen on his face at her tone.

"Fiddlesticks!" she answered, crossly.

"Are you feeling worse to-night?" he asked.

"Yes—no, I don't know as I am. How is everything going down-stairs?"

"Fine!" he answered, enthusiastically. "Milicent is a smart girl, an uncommonly smart girl. She does wonders, and she's hypnotized Nannie so the child pitches in and works like a good one mornings and after school."

Deborah turned her head away with an impatient movement. It somehow made her angry and miserable to have Sam praise Milicent so extravagantly. Men were so simple. Milly had probably blacked the stove, and made hot gems for breakfast, and set the table in the dining-room, and very likely in his eyes that outweighed hours and hours of hard work in the blazing sun out of doors. She guessed if she, Deborah, stuck closely to the house he would see a great difference and not think it was so praiseworthy and smart.

Sam left her with an uncomfortable feeling that he had in some way offended, though he couldn't for the life of him think how.

One evening Sam went to the village, and did not return till after Deborah was asleep. When he came into her room the next morning she saw that he had on a clean, whole shirt and a necktie and brand-new overalls. His hair had been cut also, and his mustache trimmed.

"Seems to me you are putting on a good deal of style," she commented, frigidly. "Have you had a fortune come to you, or are you looking forward to the poorhouse?"

"Now, Deborah, don't be silly," he reproved her good-naturedly. "These shirts were only fifty cents apiece—four for one dollar and ninety cents."

"Four! What did you get four for? And where are your others? There was two or three weeks of wear left in them."

"Well, Milly said it was less work to wash two moderately dirty ones than one very dirty one; and as for the old shirts, Milly and I looked them over and decided they had paid for themselves and might go into the stove."

"The stove! Why not the rag-bag? I don't think it's right to waste things. That is the way I was brought up, anyway."

"Milly said they wouldn't bring more than a cent apiece, and 'twas worth ten to wash them."

"Milly! Milly!" mimicked his wife, angrily. "Anybody, to hear you talk, would think that wisdom was going to die with Milly."

Another morning she heard a great commotion in Nannie's room, and when she came in to say good-by before going to school Deborah asked what she had been doing.

"I've been sweeping and dusting, and changing the furniture about, and putting things away, so it would look nice," Nannie answered. "I'm going to be a first-class housekeeper, like Aunt Milly."

"It's a pretty sudden freak," said her mother. "You never cared about having anything look nice before, that I ever noticed."

"Well, it never did any good before," Nannie answered. "Things never stayed nice two minutes."

"What! wearing your best shoes?" Deborah exclaimed, accusingly, as she looked her daughter over and noted the extreme neatness of her appearance. "There was ever so much wear left in your others! You never'll have anything if you are so wasteful!"

Nannie laughed. "These are my others," she

explained. "Aunt Milly said it was poor economy to wear them with those holes in them, so I carried them to Mr. Bailey, and he tapped them and patched them, and now they're as good as new. I blacked them."

Deborah flushed. If there was one thing she prided herself on more than another, it was her economy, and it was a little bitter to be put in the wrong, though it were done unconsciously.

"You had better run along to school, and not stand talking here," she said, coldly; and Nannie went, with her face, that had been so bright, clouded.

"What has come over me?" Deborah thought, remorsefully, the tears coming to her eyes. "I never used to be so hateful. I guess it's having to stay shut up here alone, when I know I ought to be working and accomplishing something."

It was very lonely, but Deborah had to own that it was due in part to her own perversity. She would not see any of the neighbors who ran in or brought her delicacies, and she made her own family feel that their society was not wanted. She didn't mean to be so disagreeable, but she was very unhappy, and she supposed it made her cross.

As she lay there in her room she could hear with more or less distinctness all that went on in the house —Milicent stepping about briskly getting breakfast; Nannie opening her windows and then going down to help; the men coming in with the milk, then a subdued clatter of knives and forks and a low hum of conversation as the family sat at the table.

After that Milly would come up with her breakfast, and make her comfortable and tidy for the day.

Then Nannie starting off for school, and Milly doing up the work and preparing dinner. Sometimes Sam would come in for a drink of water, and stop to chat with Milly, it seemed to Deborah for a long time, though when she watched the clock one day she found it was only a few minutes.

When the dinner had been eaten and the afternoon work done Milicent would come up-stairs and change her dress, and sit by a window in Deborah's room and sew or mend, and Deborah would feel irritated because she was in such good spirits and looked so fresh. Milicent's cheerfulness generally vanished before she went down-stairs again, Deborah was so moody and unreasonable.

Nannie came home from school a little before five, and Deborah would hear her talking very fast, telling over what had happened during the day. "She never used to tell me anything," Deborah would think, with a sense of injury.

Supper was the most trying part of the day to the invalid, for after she had eaten hers there was nothing to do but listen to what was going on below. The men's work was done except a few evening chores, and they all sat long at the table, talking and laughing, and when at last the chairs were moved away Sam would follow Milicent and Nannie to the kitchen while they did the dishes. Often, too, some of the neighbors would drop in, and Sam would linger, sometimes as late as nine o'clock, to talk to them.

"When I was down-stairs," Deborah thought, jealously, "Sam always bolted his meals, and then left the table the instant he finished, and he never dreamed of stopping to talk with anybody that came in."

At length the day came when the doctor said that Deborah might be carried down-stairs. Sam rode off five miles to borrow a wheel-chair, so that she might be wheeled from room to room there. Then he took her down very carefully in his arms. Nannie had pleaded that it might be before she went to school, and she and Sam were jubilant, and Sam came in several times in the course of the forenoon to see her.

Deborah alone did not seem pleased. She wished to be wheeled into all the rooms, and when she had made the rounds her depression had increased. The contrast between Milicent's housekeeping and her own was so marked as to be absolutely painful. She could not endure to think of all the cleaning and clearing up Milicent had gone through with in bringing everything to such a state of perfect order and exquisite cleanliness.

At dinner she hardly spoke, and though Sam and Milicent, who were apparently in the gayest spirits, did their best to draw a smile from her, she would not smile. She ate but little, and before the others were fairly through insisted on being carried back to bed.

When Milicent went up as usual after the work was done, Deborah was crying, her face hidden.

Milicent took a seat on the edge of the bed, and looked at her for a little while in silence; then she spoke. "Deborah, you have got to tell me what is the matter. I never saw any one act so queerly as you have lately. You have hardly treated one of us civilly. One would think we had done you some deep and lasting injury, instead of trying to do everything for your comfort and happiness."

Deborah made no answer, and did not stir.

"Debby, what is it? Have I done anything you don't like?"

Deborah suddenly took her handkerchief from her eyes and looked at her sister with eyes that seemed to burn. "Yes, Milicent Carr, you have," she flashed. "You have tried to get my husband and child away from me."

The quick color surged into Milicent's face, and she bit her lip to keep back the indignant retort. "I admit that I have tried to be very nice to them," she said, quietly, after a little pause, "but it wasn't with any remotest intention of winning them from you. It was simply because I was—sorry for them, Deborah."

"Yes," Deborah retorted, in an abused tone, "I suppose you think I've been the crossest person that ever lived! But I guess *you* would have felt a little out of sorts if you had been shut off up here to suffer alone, and see everybody else apparently enjoying themselves more than they ever did before! I think *you* would have felt as if you were left out of everything, and nobody cared whether you lived or died!"

"Nonsense, Deborah! Would you have been any happier to have the rest of us gloomy and miserable? And besides, I wasn't thinking of anything that has happened since your fall."

"I wasn't aware that either my husband or daughter stood in need of any one's pity previous to that," Deborah rejoined, loftily.

"Well, people look at things differently; it seems to me that they did," Milicent answered.

"Perhaps you can explain what you mean?" sarcastically.

"Yes, I can—and I don't know but I ought to, even though you should be mortally offended. It seems to me such a very serious thing—and you are so utterly blind to the seriousness of it.

"Yes, I will tell you how it looks to me," she said, with decision, after an interval of thoughtful silence, while a bright spot of color appeared in each cheek.

"In the first week of my visit here I heard you say more than once, in speaking of Sam and his good qualities, that he was a home body; that he had no interests outside of home; that all he lived and worked and planned for was his home."

[TO BE CONTINUED]

THE DESERTER'S DECORATION DAY

BY HILDA RICHMOND

"COMBINING business with pleasure, I see," said Addie Forbes, coming into her grandmother's parlor, where her cousin Fred sat scribbling away for dear life with a lot of old china before him.

"Certainly, Addie. 'Make hay while the sun shines,' you know. This is the first vacation I have had for three years. I always meant to write a description of Grandma's china for our paper, so why not do it now? It will take me only an hour or two, and I can get a neat little price for it. Reporters are always on the lookout for material, and this will work up nicely. Let me see, Grandma, is this the pitcher the Revolutionary soldiers used, or the blue one?"

"Neither one, child," said the old lady, adjusting her glasses. "It was this big brown one. My mother brought it with her when they moved to the Western Reserve in Ohio."

The pencil flew along till Addie grew impatient. "Well, good-by, Fred," she said, leaving the room, "I came to take you for a drive, but it seems you are too busy."

"Hold on a minute, Addie. I want the drive, and will be through in five minutes."

As they drove along the smooth road, enjoying the first breath of spring, Addie said, "If you are always on the lookout for stories for your paper, there is one that might interest you," pointing with her whip to a huge granite block in the cemetery.

"Tell me all about it," said the young man, eagerly.

"I'll give you the skeleton of the story, and you can clothe it with whatever garments of flesh you see fit. To begin at the beginning, do you remember old Mr. Richards?"

"The old man who was always mourning for his son who was killed in the war? Of course I remember him. Is he still alive?"

"Yes, he is alive, and quite active, but his son was not killed in the war. That is what my story is about. Ten or twelve years ago the old man went away for a few weeks, and when he came back he brought his son's body with him. Shortly after the private funeral at the old home Mr. Richards put up that elegant monument. It gives the day and year of Joe's death, corresponding to the time his father went away, but does not give the place."

"Didn't the old gentleman ever say where he found his son?"

"No; that is the odd part about it. He never mentions him to any one. In fact, he always avoids the subject of war, and you know how he used to spend all his time talking about it. People say his son was a deserter, and was ashamed to face his father. Mr. Richards was always boasting how brave his Joe was till after he was buried here. Every Decoration Day the grave is literally covered with flowers, but the old soldiers never go near it."

"Who decorates it if not the old soldiers?"

"Why, his father. You have no idea, Fred, how that feeble old man looks after that little plot of ground. I suppose he is afraid folks will suspect the truth if he neglects it. Rain or shine, he faithfully carries flowers to the cemetery as long as he can find a blossom. I'll venture to say no other deserter was ever so honored. If you want a story of real devotion, you certainly can find it in John Richards."

"Why don't the soldiers decorate it just to please him?" asked Fred, bent on obtaining all the facts.

"Why, they say they will not honor any man who deserted when his country was in peril. You ought to hear some of the veterans. They say it is a disgrace to have the flag floating over his grave, and a lot of other things that I can't remember."

"How do they know he was a deserter?" went on Fred, relentlessly.

"My goodness, Fred, I can't give you every little crook and turn of the story. Everybody says so, and it looks very queer the way he was buried, and all."

"Where did you first hear this story, Addie? It will make a very interesting one for the paper."

"Old Mrs. Green told it to me when I was a little girl. She said she could hardly sleep nights thinking of that traitor lying in the same cemetery with her three boys, who had given their lives for their country," explained Addie, who had reached the advanced age of seventeen.

"Isn't this Mrs. Green's house we are coming to? Let's stop a few minutes and I can ask her all the particulars."

Mrs. Green proved to be the very person to supply all the details. She talked rapidly till she found that her visitor was writing down all she said. "What are you putting in that book?" she inquired, pausing in the midst of a graphic account of what she would do if ever the deserter's grave was decorated on Memorial Day by any one save his father.

"Oh, I simply want to report the facts in the case to the War Department at Washington," said Fred, carelessly. "It will be very interesting to them to find out what became of a deserter from the army."

"For the land's sake!" screamed the old lady. "Don't say that I said this to you. I hain't never really heard that Joe Richards deserted, but folks said it looked mighty queer. Are they likely to send some government man to ask about it?"

"I shouldn't wonder," said Fred, pocketing his book. "They certainly ought to."

"I'm goin' away on a long visit, so he won't find me if he does come. Anyway, I never said a bit more than the rest of the folks around here, so they'll have to stand it. I'd just like to see old Mrs. Lee in trouble. She's the one that started the story about poor Joe. He was one of the nicest, brightest boys in this part of the country before the war, and I can't think he would run away like a coward."

"The government will be glad to look up the matter, and they won't hesitate to call on you whether you are at home or not." To himself Fred said, "I'll give you one good scare. Maybe it will do you good." Then aloud he said, "I am very much obliged to you for your information, Mrs. Green. Good-day."

In the weeks that followed Addie forgot all about Joe Richards. True to her word Mrs. Green went away for her visit, taking care to keep her destination a secret. Fred Forbes was back in the city working as only busy reporters do, and his brief letters to his cousin did not mention the story. Day after day John Richards carried flowers to his son's grave, dividing his time between this task and the garden where he raised the blossoms at home.

The young people were decorating the church for memorial services one day late in May, when the postmaster came in all out of breath with a special-delivery letter for Miss Adeline Forbes. Special-delivery letters were rare at this little country office, so the obliging official closed up shop and hurried out to find the owner. "I 'lowed something must be wrong, so I brought it right away," he said, fanning himself after his hasty walk.

"Just listen to this!" exclaimed Addie, after reading the letter. Everybody gathered around to hear it.

"MY DEAR COUSIN:—Do you remember your story about the deserter's grave in the old cemetery that Mrs. Green told you? Before writing it up for the paper I sent Joe Richards' name and regiment to the War Department, and asked them for his record in the army. I send you the reply I got, and hope you will give it a wide circulation without letting it come to the ears of his sensitive father.

"It seems that Joe was detailed to look after a lot of sick and wounded soldiers in an old farm-house down in Georgia, and the sight of the suffering turned his brain. He did everything for the poor, mangled sufferers that he could, but lost his reason. He and his comrades were captured by the rebels, and in the troublous times that followed Joe's identity was completely lost. After the war he was confined in an insane asylum, and only when death came to release him was he able to tell about his former life.

"His poor old father was heart-broken at the thought of his son suffering all those years among strangers, and never spoke of it to any one.

"I will never print the story. It is too pathetic and too sacred; but I hope you will see, Addie, that the poor fellow has justice in the minds of his neighbors and one-time friends at last. I had hoped to come back and bring the letter myself, but cannot get off. I am sure you will show it, though, to as many as possible before Decoration Day. Hastily, FRED."

John Richards sat near his son's grave, as he always did while the work of decorating was going on, and looked wistfully at the white-robed children strewing flowers while the band played a solemn funeral dirge. "My Joe was as brave as any of them," he said aloud. "And yet they never put flowers on his grave. Poor boy, as long as father lives you will not be neglected."

Nearer and nearer came the music, and nearer and nearer marched the flower-laden children. Keeping step to the music, the old veterans took their places around the Richards' lot, and one by one twelve exquisite floral pieces—one for each year he had been neglected—were laid near Joe's blossom-covered grave. Through his tears Joe's father saw a white pillow inscribed "Comrade," and a lovely crown laid reverently on the green sod, and then he sobbed like a child.

A choir, led by the musicians, sang "Rest, Hero, Rest," after the wealth of flowers had been lavished on poor Joe; and then the crowd drifted away, leaving the old man, who never knew his son had been thought a deserter, to gaze with proud satisfaction on the tardy tributes to the memory of his soldier boy.

How to Dress

FOR SUMMER MORNINGS

A TASTEFUL dress for morning wear is always much sought for. Select any of the pretty cottons —the muslins with embroidered dots or any of the printed materials.

The matinée can be used to wear with several skirts if of a suitable material. With a petticoat of the same. They can both be trimmed with frills of the material, bands of fine needlework or embroidered flouncing.

The skirt is cut in seven gores, trimmed at the lower edge with knife-plaiting, above which is a pointed flounce edged with appropriate embroidery.

Tasteful dresses of this kind should always be in every woman's wardrobe, as they are always ready to put on when one is tired from wearing the usual street-costume.

Made of the light shirting calicoes they are pleasant wear for warm Sunday afternoons.

The daintiness of this gown is never lost even upon a plain woman.

JACKET 4114—SKIRT 4007

HATS AND BONNETS

Hats alone for every one grown up. Bonnets only for the wee little ones.

The stringless toque hats are being adopted by many of the ladies who are now past middle life who have heretofore worn bonnets exclusively. They are vastly becoming to the older faces, and where framed in a front of silvery white hair lend even a youthful appearance to the face.

If only the elderly ladies could be persuaded to leave off wearing black. It accentuates every line of age in the face, sharpens the wrinkles and brings out every defect. Grays in all shades. the soft modes, lilacs, deep plum and the navy blues are so much more becoming. The small pink roses are a very becoming adjunct to the toque worn by a lady past middle life. Leave black to the girl with the roses of youth upon her face.

This is really a black goods season, many even quite young wearing entire black suits trimmed with white, and all-black hats, or black relieved by rosettes or quills of white. Hats of black tucked chiffon with an over scarf drapery of white maline edged with point-lace relieve the blackness for a young face, the under side brims being filled with tiny pink roses.

PONGEE WITH VELVET

Pongee is a material always a favorite. It is very serviceable as a traveling-dress. Combined with green velvet as a trimming it is always a becoming dress, and has a fresh appearance.

The skirt is one of five gores, with a flare below the knees, which gives a full and graceful sweep to it.

The waist is the popular "Gibson" waist, with tucks both back and front in addition to the usual shoulder-plait characteristic of the "Gibson" waist. The sleeves are finished with deep cuffs.

WAIST 4122—SKIRT 4026

Any of the season's walking-hats make a becoming addition to this costume.

A good shirt-waist hat looks well with all dresses, but a dressy hat should never be worn with a shirt-waist.

Milliners have made a specialty of hats for all occasions this season, and if you cannot afford three hats, as every one should have, keep on the safe side with one hat, and let it be of a kind that will suit all occasions. A plain one is never conspicuous or out of place; a dressy hat is suitable only for dressy occasions.

Black and white is one of the season's favorites, and is shown in silk, lace, chip, and the fancy straws. Feathers and flowers are in the same extreme colors.

VEILING AND LACE DRESS

Dresses of the same material throughout are always in best form for any afternoon function. This one, of French veiling, is admirably adapted to wear indoors.

Conceived in meteor-blue, trimmed in twine-colored lace and black velvet ribbon, its service would appeal to any one not caring to invest in too many gowns.

The waist is snug-fitting, with a deep, round yoke, which can be of the dress material or of white silk, the remainder of the waist being laid in a double box-plait to the waist. The sleeves are snug-fitting at the upper portion, and gathered a little below the trimming, and also at the wrist-band, where they are held by the narrow cuffs.

The skirt is cut in five gores, with a graduated box-plaited flounce at the lower edge. The present season's skirts are all unlined, but must be worn over another skirt made like the outside one, though differing in the lower trimming. This can be of the mercerized goods, which so nearly resembles silk and wears much better. If stiffening is required it can be put in the second skirt.

This dress would work up nicely in soft white wool goods for graduation purposes, using mull chiffon trimmed with white satin ribbon and medallion laces.

4119

While it is in good taste to preserve the high-neck arrangement, elbow-sleeves can be worn with this waist if so desired.

CLOAKS AND WRAPS

The long coat will be much in favor this season both for street wear and traveling.

For street wear it will be made of black taffeta silk, with black trimmings or Irish-point lace in white. For traveling, of gray mohair in shades varying from very light to dark.

This can be donned at the end of a journey and gives one quite a chic appearance upon arrival at the destination, in case a change of toilet cannot be indulged in.

Gloves should always be worn constantly on a long journey, as the grime of travel is very hard to remove. Carry as little baggage as possible. The suit-case is all that is necessary.

COSTUME FOR YOUNG GIRL

Scotch tweed in shades of brown, tan or cameo makes up best for a young girl.

Absolute tailor neatness is required in a suit of this description. Being trimmed with bands of the material calls for much pressing and very accurate measurements and even stitching. If a contrasting cloth is used as a trimming it must be of plain material. Steel buttons are a good trimming upon any of the above-named colors.

Two styles of jackets are given in the illustration. It can be trimmed with straps, as in the large one, or in silk covered with batiste, as shown in the small one. Cream-white moire is much used, and is a very handsome trimming. A thinner silk can be used if covered with the batiste, and could be a color—either green, pale pink or blue.

A hat of white chip with brown velvet and a quill would be a suitable finish for this costume.

The present season is rife with beautiful and appropriate hats for misses. This is a branch of millinery not widely enough thought of by the usual milliner. It is a gift not given to every one to know just how to conceive a hat suitable for a miss—one in which she seems past the boundary-line of little girlhood and still not old enough to do as well for an older sister.

There is no time in a girl's life when she is so hard to dress as at fifteen. Great taste must be displayed with her at this time.

JACKET 4110—SKIRT 3903

GIRL'S COSTUME 4113

A LITTLE GIRL'S FROCK

The lavish array of beautiful white goods gives the mother of little girls a large amount from which to choose.

This dainty little dress is trimmed with needlework embroidery, and bands of insertion beading threaded with black velvet ribbon combined with a yoke of insertion tucking. The waist is high, with elbow-sleeves, but provision is made in the pattern for this to be made as a separate guimpe, if wished, whereby it can be worn with the dress made of a different material.

The skirt is made of front and side gores, but straight back. As so many of these dresses must be considered in a little girl's wardrobe, those of the greatest simplicity will appeal to the careful mother. Some of the art linens in colors or of string-color make well-wearing dresses for little girls. While the first cost may seem high, yet the wearing qualities and good fastness of the colors will justify the expense. It does not pay to buy poor or fleeting material for children.

The careful mother will get fewer dresses and better material. The French and silk ginghams will wear till threadbare without fading, and are then good enough to use for another child.

Any one of these patterns furnished from this office for ten cents.

Wit and Humor

THRILL HUNTERS

CLARA—"It's a thrilling story, isn't it?"

Maud—"One of the most thrilling I ever read. I couldn't skip more than half of it."—Detroit Free Press.

AVOID SUSPICION

If a man told his sweetheart yesterday that she was the nicest girl in the state he must tell her to-morrow that she is the nicest girl in the world, or she will begin to suspect something.—Atchison Globe.

HE KNEW WHY

Ascum—"What became of the story you sent to the *Klaptrap Magazine?*"

Scribbler—"Rejected. I fancy it was too clever."

Ascum—"Too clever?"

Scribbler—"Yes; I suppose they were afraid it would distract attention from their advertising pages."—Philadelphia Press.

NO VENTURE ABOUT IT

"Is this your first venture in matrimony?" the preacher asked while the bridegroom was out in the vestibule giving certain instructions to the best man, who was also his head clerk.

"My dear Mr. Goodleigh," she replied, almost blushing, "this isn't a venture at all. He has given me deeds to more than sixty thousand dollars' worth of property already."—Record-Herald.

WHY SHE WAS OUT

First nurse-girl—"Seems to me y'r puttin' on a heap o' style drivin' in the park with a moneygrammed kerriage, and coachman and footmen, too. Does y'r missus lend ye her private rig?"

Second nurse-girl—"She sends me to take her pet dog out fer an airin'."

First nurse-girl—"But where's the dog?"

Second nurse-girl—"Under the seat."—New York Weekly.

APPROPRIATE TEXTS

Some years ago a Philadelphia preacher inaugurated in his Sunday-school the practice of having the children quote some scriptural text as they dropped their pennies into the contribution-box. On the first Sunday in question a little shaver walked up, and said, "Charity shall cover a multitude of sins," and dropped in his penny. "It is more blessed to give than to receive," quoted the second, and so on. Just then up walked a little fellow with the unmistakable remnants of molasses-candy on his chubby face, and as he dropped his cent he bawled out, "A fool and his money are soon parted."—Argonaut.

The Family Lawyer

By JUDGE WM. M. ROCKEL

Legal inquiries of general interest from our regular subscribers will be answered in this department free of charge. Querists desiring an immediate answer by mail should remit one dollar, addressed "Law Department," this office.

TELEPHONE-COMPANY RIGHTS.—J. N., Illinois, inquires: "Has a telephone company the right to string its wires across my land? Can it put poles along a public road running through my farm?"

Without proceedings in court to condemn your lands for the purposes set forth in your inquiry a telephone company could neither string wires across your land nor put up poles along a public road running through them. However, by the law of eminent domain, the company could bring an action in court, and in that manner procure a right to erect the poles and string their wires, etc. The use of telephone-lines is a use of a character that the public welfare requires, and therefore the right of private property may be made subservient to their purpose.

The string of wires across your farm, while it might not materially injure it, would invade the right of property, for it is an old settled principle of law that a man who owns the soil, owns from the heavens to the center of the earth. In Ohio it has been held that the laying of a tile-ditch, while it would be no actual appropriation of any land, yet it would be a technical violation of the right of property, and could not be done without payment made therefor. The easement of right of way for a highway can only be used for purposes of a highway—that is, travel and traffic in the usual manner highways are used—and a telephone service is not one of that character, and therefore poles could not be erected without compensation.

SURVIVING WIFE'S RIGHT OF PROPERTY.—M. O., Montana, writes: "If a man dies without a will, what portion of his estate will go to his wife, and what to his children?"

This matter is regulated by statute in the various states. In your state the law provides that if the deceased left a husband or wife and one child, or the lawful issue of one child, it is divided equally between the survivor and the child, or the issue of one child. If more than one child, then one third goes to the surviving husband or wife, and the remainder in equal portions to the children. This applies to both real and personal property. The older states make a distinction.

CANCELLATION OF MORTGAGE.—J. E. C., New York, asks: "Is the holder of a mortgage obliged by law to give a satisfaction price when the mortgage is paid in full?"

I do not fully comprehend the information desired by the above inquiry or what the writer means by "satisfaction price." I presume he means a receipt or a cancellation of the mortgage. Unquestionably the payor of the mortgage has a right to demand that a proper cancellation be made either on the mortgage instrument itself or upon the public records where the mortgage is recorded; and if the holder would refuse to make such a cancellation, it would be a good defense against payment of the mortgage, for the holder of the land has a right to demand that the incumbrance placed thereon by the mortgage be removed in a proper manner upon the public records when payment is made.

The Young People

THE DESERTED COOP

BY JESSIE EWING STOKES

FOUR little eggs lay under Banty-Hen, who brooded over them dreaming of joys to come. Babies Three waited and watched with equal patience and anxiety. One spring day two little golden-brown Banties, beautiful as birds, and a downy Leghorn, with breast of canary hue, nestled under the little mother. They were put into a nice warm basket, tenderly hovered and watched and fed, until it was sure that the other egg would not hatch. Then Mother Banty and her chicklings were put into a coop, where food and water awaited them. Eager little eyes watched the new family. Babies Three cuddled the little downy heads against their necks, then set the nestlings gently down again. As the Mother Banty, with her suggestive clucks, taught her chicklings how to eat, to drink, to lift up their little heads and be thankful for the water, to come to her when called, and all the lore that little chickens must learn, the little watchers interpreted her directions among themselves.

Oftentimes a venturesome little chick would jump on its mother's back and have a fine ride. When evening drew near they would all sing their little sleepy song:

"Peep, peep, peep, peep, peep, peep,
Cuddle up, cuddle up, cuddle up,
Chirp, chirp, chirp, chirp!"

and soon all was still in the coop.

One morning one little golden head was missing. Babies Three found a few feathers and one little bone behind the coop. It had ventured too far, and Mother Banty could not protect it. The prowling old cat had eaten our pet. Next the little Leghorn became ill. Babies Three cared for it, and fed it for a week, but it was blind and weak and listless, then it took the "gapes," and one day breathed softly away. Babies Three dug a little grave, held a little service, put up a brick headstone, and covered the mound with flowers.

Mother Banty and one chicken then roamed over yard and garden by day, returning at night to the coop. Time after time the cat tried to get the little chicken, but was driven away. But one morning the coop was empty. A neighbor had seen a cat going swiftly away with the little chicken in his mouth. Sad were Mother Banty and Babies Three, and sore were the older hearts; for there is something about a downy, wee chicken that creeps into our hearts like the tiny, downy baby that cuddles its warm face to ours, touches us with its warm little hands, and calls forth the sweetest feelings known to woman.

THE FIRST LESSON

The first lesson I learned was to be obedient. One evening when yet in my nurse's arms I wanted to touch the tea-urn, which was boiling merrily. My mother bade me keep my fingers back; I insisted on putting them forward. My nurse would have taken me away from the urn, but my mother said, "Let him touch it, nurse." So I touched it; and that was my first lesson in the meaning of the word "liberty." It was the first piece of liberty I got, and the last which for some time I asked for.—Ruskin.

The Family Physician

By ROBERT B. HOUSE, M.D.

FRUITS FOR THE SICK

THERE are many times when the sick should not eat raw fruits, but can take cooked fruits. Any and all fruits may be cooked—in many ways, all attractive. Compotes are fresh fruits stewed; they are usually made by first making a syrup of three and one half cupfuls of sugar and two and one half cupfuls of water, and boiled five minutes. The time must be counted from the time it actually begins to boil. When it is boiling drop the fruit in carefully, a few pieces at a time, so that they will not break; cook until tender, but firm enough to keep their shape; remove with a skimmer, arrange daintily on a dish, then boil down the syrup until thick, and pour it over the fruit. Let it cool before serving. Apples, pears, peaches, apricots and oranges may all be cooked in this way.

THREE FACTS WORTH KNOWING

1. A child cannot raise its head from the pillow before the second month. 2. A child cannot sit erect before the fifth month. 3. A child cannot walk before the tenth month, and should walk at the twelfth month.

If the preceding facts could be borne in mind, and mothers be instructed as to just what a child can do and cannot do at certain periods of its early existence, then there would be less work for the orthopædic surgeon.

If the young infant is allowed to sit or stand at too early an age the superincumbent weight of the large head tends at once to exaggerate the physiological curves of the spine to a point when they may become pathological.—Journal of Pediatrics.

REMOVAL OF FOREIGN BODIES FROM THE EARS

Deposit of wax is a frequent cause of deafness; however, this is very readily remedied by a small syringe and warm water, though it is sometimes necessary to soften the wax by filling the ear with a solution of bicarbonate of soda at bedtime. It can then be easily removed the following day. The ears should be washed only with warm water, and no cold solution should be used in the ear. Great care should also be exercised in syringing the ear not to use too much force in applying the water, as harm may result therefrom. The physician is frequently called upon to remove foreign bodies from the ear, such as insects, grains of wheat, corn, beans, slate-pencils, etc. Sweet-oil or glycerin will usually kill or quiet an insect, after which it can be removed like any other foreign body—that is, by means of a syringe and warm water. Never use a probe, ear-spoon or forceps in these cases, as a great injury has been done with these little instruments while contending with a struggling child. Foreign bodies sometimes remain in the ears for years without doing injury, so there is no need of haste, excitement or forcible methods in dealing with them.—Medical Summary.

A gallon of water is none too much for a typhoid-fever patient to take in twenty-four hours, but it must be free from impurities, and unless reliable tests are at hand to insure it, boiling and then cooling it is the safest.

BEAUTIFUL PICTURES AND FREE COUNT IN THE DOT CONTEST

$1,500.00 CASH PRIZES

WATERFALL BY MOONLIGHT

One Picture and One Count - - - 25 Cents
Three Pictures and Three Counts - 60 Cents

These counts are on the number of dots in the diagram printed on Page 19 of this issue of the Farm and Fireside. Twenty-five cents entitles you to your choice of any one of the beautiful pictures described below, and also to one count of the dots. Sixty cents entitles you to three pictures, your choice, and three counts of the dots. This enters your count or counts in the dot contest the same as if you accepted the offer on Page 19.

Remember These Great Prizes

FIRST PRIZE	$500.00 Cash
Second Prize	$200.00 Cash
Third Prize	$100.00 Cash
4 Prizes, $25.00 each	$100.00 Cash
10 Prizes, $10.00 each	$100.00 Cash
40 Prizes, $5.00 each	$200.00 Cash
150 Prizes, $2.00 each	$300.00 Cash
Total	$1,500.00 Cash

If possible, use the blank printed at the bottom of this page; or cut a piece of paper the same size of this blank.

WORLD'S GREATEST PICTURES

MORE DESIRABLE THAN EXPENSIVE ENGRAVINGS

Some competent judges pronounce our pictures more attractive and desirable than expensive engravings. Remember that including the margins they are TWENTY BY TWENTY-FIVE INCHES IN SIZE, FIVE HUNDRED SQUARE INCHES, about ten times the size of the reproductions commonly sold.

Choose From This List

ORDER BY NUMBER

SUNSHINE AND SHADOW	*Stone*	No. 801
I AM LORD OF ALL I SURVEY	*Cleminson*	No. 805
DEFIANCE, or STAG AT BAY	*Landseer*	No. 789
AN IMPUDENT PUPPY	*Noble*	No. 804
GRACE DARLING AND HER FATHER	*Carmichael*	No. 803
ST. CECILIA	*Naujok*	No. 806
PHARAOH'S HORSES	*Herring*	No. 785
WATERFALL BY MOONLIGHT	*Rieger*	No. 795
CAN'T YOU TALK	*Holmes*	No 794
KISS ME (Child and Dogs)	*Holmes*	No. 790
THE HORSE FAIR	*Bonheur*	No. 796
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THE LITTLE SHEPHERDESS	*Koller*	No. 791
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Cut along this line

FARM AND FIRESIDE
Springfield, Ohio

My count (or counts) of the dots is:

.....

Inclosed find .....
(Amount of money)

to pay for picture (or pictures) No. ....., ..., ...

Name .....

Post-office .....

County ..... *State* .....

Cut along this line

For Illustrations of Other Pictures See the Issue of the Farm and Fireside for April 15th, and Also Other Back Numbers.

PHARAOH'S HORSES

These pictures are on the very FINEST AND MOST ELEGANT PICTURE-PAPER, beautiful ivory-finished, extra-heavy weight. They are SUPERB FOR FRAMING. The original oil-paintings from which these famous art works are reproduced cost HUNDREDS OF THOUSANDS OF DOLLARS and could not possibly be seen without a tour of the great art galleries of the world. The proprietors of these pictures have gone to great expense to make faithful reproductions.

They are of sufficient size to bring out all the delicate effects of the originals.
They are the greatest achievement in artistic reproductions, combining at once the highest quality and low price.
They are unexcelled for beauty and clearness, and satisfy the most critical lovers of pictures.
They will not and cannot fade. This is absolutely guaranteed.

You May Accept Any Offer Made in this issue for One Year's Subscription to the Farm and Fireside, and Send One Count With It. The Pictures Will be Sent by Mail, Securely Packed and Postage Paid. Entire Satisfaction Guaranteed.

Address FARM AND FIRESIDE, Springfield, Ohio

TRY YOUR SKILL AT COUNTING.

$1,500.00 CASH PRIZES

The Prizes Will be Awarded for the Correct or Nearest Correct Counts of the Dots in This Diagram. 207 Separate Prizes.

HOW MANY DOTS ARE THERE HERE?

ONE GRAND PRIZE OF FIVE HUNDRED DOLLARS CASH

PATENT APPLIED FOR. 12-6-01

Every one sending 35 cents, the regular clubbing price, for one year's subscription to the Farm and Fireside, will be allowed *ONE* count of the dots Free.

Three yearly subscriptions and *three* counts (either for yourself or others) for One Dollar.

REGULAR SUBSCRIBERS will have their time extended for a number of years equal to the full amount of money they send in. You may accept any offer we make in this May 15th number for a year's subscription to the FARM AND FIRESIDE and send one count with it.

THE LIST OF LIBERAL CASH PRIZES

FIRST PRIZE - - -	$500.00 Cash
Second Prize - -	$200.00 Cash
Third Prize - - -	$100.00 Cash
4 Prizes, $25.00 each	$100.00 Cash
10 Prizes, $10.00 each	$100.00 Cash
40 Prizes, $5.00 each	$200.00 Cash
150 Prizes, $2.00 each	$300.00 Cash
Total	$1,500.00 Cash

What Other Way of Spending One Hour Will Offer You $500.00 Cash?

Here is a splendid opportunity to win a great cash prize as the reward of only a little perseverance and care. The exact number of the dots can be counted by any one at the price of a little time.

Use any method you wish in counting the dots. Exercise your ingenuity, and devise some means of insuring correctness in your count. One way of counting is to go over all the dots in a part of the diagram and then estimate the rest. But the best way is to count all of them.

If possible, use the subscription blank printed on this page; or, if desired, a sheet of paper may be used the same size as the blank printed on this page.

You can count as many times as you want. Send 35 cents with each count. Each count will then be registered, and you will receive a full year's subscription to the FARM AND FIRESIDE for every 35 cents you send in.

If two or more give the correct count the grand prize will be divided.

The count is absolutely free. Every cent paid is applied on your subscription.

This magnificent offer is made for the exclusive benefit of the readers of the FARM AND FIRESIDE. The contest is new, and was gotten up to test the skill of our readers. If you are not already a subscriber to the FARM AND FIRESIDE, now is the time to subscribe. No one employed by or connected in any way with the FARM AND FIRESIDE will be allowed to enter the contest.

ADDRESS FARM AND FIRESIDE, SPRINGFIELD, OHIO

It will pay you to read every word on this page, and to then send in one or more counts. The more counts you send in the greater your chance of winning one of the big cash prizes. Count the dots half a dozen times, and you will be almost sure to send in the correct answer.

What is your time worth? Why not make it worth **a hundred dollars an hour** by winning the first prize in this great contest offer?

Any one can count these dots. It costs nothing. At the same time the prizes are so great that you have a big chance of winning hundreds of dollars for the short time it takes to count the dots.

Even if your answer is not correct you may get a prize, because the money goes to those who send in the correct **or nearest correct** counts. We do not care who wins the prizes. They are yours if you have the right skill and perseverance.

USE THIS COUPON, IF POSSIBLE, OR CUT A PIECE OF PAPER SAME SIZE AS THIS COUPON.

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Springfield, Ohio

Inclosed find .....
(Amount of money)

to pay for ..... *subscription*
(State whether one or three years)

to the Farm and Fireside.

My count (or counts) of the dots is:

.....

.....

.....

Name .....

Post-office .....

County ..... *State* .....

Are you a new or old subscriber? .....
(Write "New" or "Old")

Cut along this line

Farm Selections

NEWS-NOTES

Petaluma, near San Francisco, is the home of no less than five hundred thousand hens. The average profit derived from each hen is said to range from one dollar to one dollar and fifty cents each year.

The progress of the growth of the rice industry in Louisiana and Texas during the past year is a marvelous one. The Jennings Rice Mill Company is now erecting an up-to-date rice-mill that will have a capacity of fifteen hundred barrels of clean rice daily.

The Department of Agriculture has issued a pamphlet devoted to winter-forage crops for the South. It was prepared by Mr. Carleton R. Bell, of the Bureau of Plant Industry. It is designated as Farmers' Bulletin No. 147, and is sent free to all applicants.

Strawberry-growers are coming to realize the fact, from a business standpoint, that it costs just as much to pick and assort for market small and inferior berries as it does large, bright-colored, high-flavored ones, that are sure to command the highest price in the city markets.

The Hudson Valley Canning Company, of Mechanicsville, N. Y., will pay eight dollars a ton for sweet-corn of the Crosby's Early, Country Gentleman and Stowell's Evergreen varieties. A ton will be about thirty bushels of ears with the husks on. Twenty-two and one half cents a bushel is to be paid for tomatoes, and a liberal price for Golden Wax beans. * * *

CALIFORNIA'S FRUITS AND FLOWERS

[CONTINUED FROM PAGE 12]

Early in June the apricots begin to appear—gleaming globes, of yellow or orange color, by their form allied to the peach, and by their pit to the plum—while clouds of small birds feast in their tree-tops, choosing always the reddest-cheeked, most luscious apricots in which to insert their small, sharp beaks. Orioles, in brilliant plumage of orange and black, skim through the branches of these trees and form a living bit of harmony with the fruits' hue. Bees add their slumbrous music to the dreamy, hazy fruit-time.

Peaches, brilliant in yellow and crimson, join the procession of fruits and hang heavily amid foliage which when the late fall days arrive glow with the rich colors of frost-nipped Eastern maples. Nectarines, smooth outside as plums, yet having the form and stone of the peach, unite with plums, prunes, grapes and the small fruits to form a perfect fruit harvest.

In the "Mission" grape—the wine-grape of the vast vineyards—the influence of the early Spaniards is seen again; for this grape is so called because the mission fathers introduced it from Spain long years ago. Thick, ovid and solid, the "Mission" grape differs greatly from the ordinary Eastern varieties. Of the raisin-grape, white and sugary-sweet, it is interesting to know that a bunch of raisins may be made simply by laying a bunch of these Muscat grapes in the California sunshine. No sweetening is required, as many believe. Instead, the sunshine leaves the raisins sweet enough.

On every hand one may see among these California fruit orchards the Chinamen tending the trees and fruits and gardens. However much despised, the Chinese perform no small part in making southern California the glorious region it is; and they add their own quaint picturesqueness to the scene, as they appear in wicker hats like inverted work-baskets upon their heads, and in their queer, loose-fitting clothes and wooden shoes. One sees these Chinamen among the orchards, though there are many Americans, too, employed by the fruit-growers, as any one may see in fruit and vintage time.

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THIS BOOK WILL BE MAILED FREE (Postage Prepaid) if You Write Us (Letter or Postal) and Answer 3 Questions:

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FINE NEW PATTERNS

These patterns retail in fashion bazaars and stores for twenty-five to forty cents each, but in order to increase the demand for our paper among strangers, and to make it more valuable than ever to our old friends, we offer them to the lady readers of our paper for the low price of only *10 cents each.*

Full descriptions and directions—as the number of yards of material required, the number and names of the different pieces in the pattern, how to cut and fit and put the garment together—are sent with each pattern, *with a picture of the garment to go by.* These patterns are complete in every particular, there being a *separate* pattern for *every single piece* of the dress. All orders filled promptly.

For ladies, give BUST measure in inches. For SKIRT patterns, give WAIST measure in inches. For misses, boys, girls or children, give both BREAST measure in inches and age in years. Order patterns by their numbers.

Satisfaction guaranteed or money refunded.

To get BUST and BREAST measure, put the tape-measure ALL of the way around the body, over the dress, close under the arms.

Special price of each pattern 10 cents.

Postage one cent EXTRA on skirt, tea-gown and other heavy patterns.

FREE We will give any TWO of these patterns for sending ONE yearly subscription, new or renewal, to the Farm and Fireside at the clubbing price of 35 cents.

Or we will send the Farm and Fireside One Year, new or renewal, and any ONE pattern for . . . . . **35 Cents**

ANY ONE ACCEPTING THIS OFFER IS ALSO ENTITLED TO ONE FREE COUNT IN THE DOT CONTEST. SEE PAGE 19 OF THIS PAPER. . . . .

Address FARM AND FIRESIDE, Springfield, Ohio

No. 4125.—LADIES' BOX-PLAITED WAIST. 10 cents. Sizes, 32, 34, 36, 38 and 40 inches bust.

No. 4000.—LADIES' PLAIN SHIRT-WAIST. 10 cents. Sizes, 32, 34, 36, 38 and 40 inches bust.

No. 4090.—CHILD'S FRENCH DRESS. 10 cents. Sizes, 2, 4, 6 and 8 years.

No. 4066.—MISSES' SHIRT-WAIST. 10 cents. Sizes, 12, 14 and 16 years.

No. 4085.—MISSES' TUCKED WAIST. 10 cents. Sizes, 12, 14 and 16 years.

No. 3797.—SUNBONNETS. 10 cents. Sizes, small, medium and large.

No. 4099.—LADIES' SHIRT-WAIST. 10 cents. Sizes, 32, 34, 36, 38, 40, 42 and 44 inches bust.

No. 4073.—LADIES' SHIRT-WAIST. 10 cents. Sizes, 32, 34, 36, 38 and 40 inches bust.

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No. 4055.—MISSES' FIVE-GORED SKIRT. 11 cents. Sizes, 12, 14 and 16 years.

No. 4127.—CHILD'S DRESS. 10 cents. Sizes, 2, 4 and 6 years.

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$1,500.00 Cash Prizes Given Away

For full particulars see Pages 18 and 19 of this paper.

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Always name your post-office.

COMMENT

LINES FROM SUBSCRIBERS' LETTERS

"We always watch eagerly for the coming of the paper, and always find something useful and instructive in its pages."

"We—the paper and I—are old friends of about twenty years. I prize it very highly, and think it continues to grow better and better."

"I like the new 'make-up' of the paper much better than the old way. Every department is read with interest, and they are all instructive."

"I wish to congratulate you on the admirable appearance of the FARM AND FIRESIDE. It was good enough before, but it surely is better now."

"I have been a reader of the FARM AND FIRESIDE since 1889. I have obtained much information from it, and always wait anxiously for its arrival."

"I notice a decided improvement in the May 1st number of the FARM AND FIRESIDE. While it was fine before, it is better now. The classification of subjects is an improvement."

The President signed the Oleomargarine Bill May 9th in spite of the strong pressure brought to bear on him.

Mount Pelee, in Martinique, and La Soufriere, in St. Vincent, have joined the long list of famous volcanoes like Vesuvius and Krakatoa, that have irregularly dotted the world's history with records of terrible disasters.

That nations rushed to aid the surviving inhabitants as soon as the news of the great calamity was flashed from the Windward Isles distinguishes the broad humanity of the present age.

The violent activity of the volcanoes in the Caribbean region at this time has an important bearing on the location and construction of the interoceanic canal. It is pointed out that there are no volcanoes, either active or extinct, near the line of the Panama route, and that there are a dozen active volcanoes in Nicaragua and Costa Rica, some of which are very near the line of the proposed Nicaraguan Canal.

DIFFERENT VIEWS OF COMBINATION

There is much in looking at an object from different viewpoints. If one cannot do this himself, the next best thing is to find out how another sees it from a different standpoint. In his characteristic way the Rev. Sam Jones expresses this view of great combinations:

"The great railroad combinations, many think, will eat us up blood rare. Occasionally I get on a little jerk-water road that is not in the combination, and I want to double my accident policies and be satisfied with a fifteen-mile-an-hour gait, and console myself that I can ride all day for a dollar; but when I get on the Pennsylvania or Vanderbilt system of roads, with their schedules forty miles an hour, vestibule-trains, with parlor-cars, sleeping-cars, dining-cars, I have a hotel on wheels carrying me toward my destination, and all this for about two cents a mile. Give me the road that is in the combine to carry me where I am going.

"I am an expansionist, and I believe that one of the causes of stringency and shrinkage of values in this country, when they occur, will be because we have not gone out over the seas with our products, as we should have done. While there is a demand for our products of the farm and manufactory of this country, there will always be plenty of money; but when wheat and corn and cotton and all kinds of manufactures are a drug on the market, and no demand for them, then we have stringency and hard times. But when the highways over the seas are laden with our products into foreign countries, and the gold is brought back in the ships, then we shall flourish perennially. These great combinations are the only powers in this country that can do this thing for us. A negro and an old mule can make corn and cotton; a fellow with a two-hundred-dollar sawmill can make lumber; but only aggregations of wealth and up-to-date appliances can do it cheaply, and can build ships and open markets for our surplus in foreign lands."

On the other hand, the Legislative Committee of the National Grange, takes this view: "The Interstate Commerce Commission a short time ago took testimony at Chicago as to the cost of transportation of wheat from Chicago to New York. This testimony showed that the average car-load of grain moved by the Lake Shore Railroad was about sixty thousand pounds. The traffic manager of the road testified that the standard train consisted of fifty such cars, and that one engine could haul this train from Chicago to Buffalo. He testified further that the entire expense of moving that would not exceed fifty cents a train-mile. The present rate from Chicago to New York is sixteen cents a hundred pounds—that is, the railroad would receive for that service five thousand two hundred and fifty dollars. As the testimony showed the expense to be but five hundred dollars, leaving four thousand seven hundred and fifty dollars profit and for use of the cars and road. One year ago this same service was performed by these same roads at eleven cents a hundred pounds, while the published rate was thirteen and one half cents a hundred pounds, but by an agreement among the roads themselves they agreed to maintain a rate of eleven cents. Under the present arrangements shippers of grain are compelled to pay five cents a hundred pounds higher than one year ago.

"There are over thirty millions of our people engaged in agriculture. The selling value of their products is absolutely at the dictation of five systems of railways, and unless these great powers are controlled by law absolutely no protection is accorded to this most important industry, that lies at the base of the prosperity of all other industries and our country."

AFFAIRS OF NOTE AND MEN OF MARK

Bret Harte, the noted American author whose original humor and brilliant series of short stories about mining life and pioneer times in the Far West made him famous wherever English literature is read, died May 5, 1902, in England.

"But lo, in the distance the clouds break away!
The Gate's glowing portals I see;
And I hear from the outgoing ship in the bay
The song of the sailors in glee.

"So I think of the luminous footprints that bore
The comfort o'er dark Galilee,
And wait for the signal to go to the shore,
To the ship that is waiting for me."

Rear-Admiral William T. Sampson, born in Palmyra, N. Y., February 9, 1840, died in Washington, D. C., May 6, 1902, and now rests in Arlington National Cemetery.

As the poet Stedman said of another distinguished naval officer:

"Let him rest where the ancient river rolls;
Let him sleep beneath the shadow and the sound
Of the bell whose proclamation, as it tolls,
Is of freedom and the gift our fathers gave.
Lay him gently down;
The clamor of the town
Will not break the slumbers of the deep,
The beautiful ripe sleep,
Of this lion of the wave,
Will not trouble the old Admiral in his grave."

Rear-Admiral John Crittenden Watson, the special representative of the United States Navy at the Coronation of King Edward VII., was born at Frankfort, Ky., August 14, 1842. He graduated from the United States Naval Academy in 1860, and served with distinction through the Civil War. He was the flag-lieutenant of Admiral Farragut, and lashed him to the rigging of the Hartford during the battle of Mobile Bay. From May 6 to June 21, 1898, he commanded the Havana blockading-squadron, a division of Sampson's North Atlantic fleet. June 27, 1898, after Admiral Camara started eastward from Spain to threaten Dewey at Manila, the Eastern Squadron was formed to go to the coast of Spain, and placed under the command of Commodore Watson. In 1899 he succeeded Admiral Dewey in command of the Asiatic Station.

James Harrison Wilson, the special representative of the United States Army at King Edward's Coronation, was born near Shawneetown, Ill., September 2, 1837, and graduated from West Point in 1860. He made a fine record during the Civil War, particularly as a dashing cavalry officer, and was brevetted to the grade of major-general. He retired from the regular army in 1870, and was largely engaged in engineering and railroad operations in this country and China until 1898, when he was appointed a major-general of volunteers for the Spanish-American War.

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POINTS FOR INVENTORS A valuable work on U. S. & FOREIGN PATENTS sent free by Alexander & Dowell, Expert Patent Attys., Washington, D. C.

Mr. Greiner Says:

SPRAYING WITH FUNGICIDES and insecticides is now getting to be an almost universal practice. No place seems to be too far back, locally or progressively, for the modern sprayer to find employment.

COMPRESSED-AIR SPRAYERS.—A dozen years ago I once asked the Department at Washington concerning the advisability of getting manufacturers to make, and people to use, compressed-air sprayers, such as at that time were already in use among the gardeners in and near Paris, France. The Department experts replied that one or two people, who in using such sprayers carried them on their backs, suddenly lost their heads, and since then I have never had the courage to even test and try compressed-air sprayers. The idea that the thing may burst at any minute while you are using it is not very pleasant. Yet I believe American manufacturers can well be trusted to make tanks that can stand any required pressure; and the idea that we can spray right along without having to continue the heavy work of pumping all the time is rather attractive.

IMPROVING CLAY SOIL.—A subscriber recently purchased a few acres of land in the suburbs of a small town one hundred miles south of Chicago. It is badly run down, and the former owner sold it quite cheaply, as he was much disgusted. Our friend has already planted trees and small fruit, and must try to improve the land by tillage and application. Professor Roberts, of Cornell University Experiment Station, has a habit of recommending "hot plowshares" as a food for such soils. Plow and harrow. Apply mineral manures—that is, ashes, potash, superphosphate, etc.—and then plant cover-crops. I think it may be useful to plant cow-peas or soy-beans in due season, and to plow them under, or crimson clover if that will grow on the land. Another method that might be tried as liable to give good results is heavy mulching with coarse stable manure, etc. The hot-plowshare treatment—that is, frequent plowing and harrowing—is usually the simplest and safest method of securing satisfactory results in the improvement of such soil. That "tillage is manure" is true in the sense that it makes available the plant-food locked up in clay soils.

LOCUSTS AND POULTRY.—Only once I happened to be where the seventeen-year locusts were the thickest. That was just seventeen years ago, and I then had a chance to note several very interesting phases of the locust invasion. Niagara County, New York, my own vicinity, is where the advent of the locusts is expected this year. Probably these insects will not come in the countless numbers that I saw in Maryland and other places in 1885, and from my observations then I have come to the conclusion that but little damage is to be feared from them here. But we may as well try to get all the good possible out of them. Wasn't it Doctor Riley who had some of them fried, and stated that they made a most delicious morsel? For myself I hardly think I shall have much appetite for the delicacy. But I know that all birds, and some mammals, are very fond of them. The entire bird tribe seem to leave their accustomed foods for the feast on locusts. Poultry and swine will just live on them and get fat. Knowing that, and expecting to have the locusts in abundance around me for at least a few weeks this year, I have made preparations for an extra supply of chicks. Feed is high-priced. So is meat. I am trying to raise plenty of chicks. When the locusts begin to sing their monotonous and deafening Pharaoh song we may gradually withdraw the grain rations, or rations of any of the chicken-cakes that we usually feed, and make our fowls, both old and young, subsist on the tender and juicy bodies of the locusts. We will get plenty of eggs, and rapid chicken-growth, too, just the same as always.

UTILIZE YOUR OPPORTUNITIES.—Mrs. J. B. M., a reader in Kansas, has a piece of land that slopes sharply to the southwest, and is composed of a four or five inch layer of good soil resting on a tight blue-clay hard-pan. How to improve this piece of ground so that it can be used for a garden is what she wishes to know. Will the free application of wood-ashes and hen-manure during the summer, with a liberal dressing of stable manure, turned under with the plow down to the clay, be good? Will a dressing of lime also prove of benefit? For garden purposes we usually recommend a deep, rich, warm, sandy loam, preferably with a southeastern slope. But a really ideal site or ideal soil is not available for everybody. Sometimes we are forced to make use of a very inferior spot for garden-making, and in that case all we can do is to make the most of given conditions and opportunities. If the surface-soil is shallow, for a small garden we may try to improve it by loosening up the subsoil, either with the spade or by means of a regular subsoil-plow. So long as plenty of stable manure can be had the task of improving the texture and fertility of the surface-layer is comparatively easy. By applying heavy dressings of it every year, turning under just as much as can be done and thoroughly mixed in, we are enabled to make a good garden-spot of almost any kind of soil when good drainage is provided. Do not be afraid of using too much good manure on the garden. There is no spot on which its application will pay better than the garden. An occasional dressing of lime seldom fails to have a beneficial effect, and hen-manure is one of the best things that can be used as a top-dressing after plowing. Never weary of well-doing. In some soils a one-time application of manure shows but little effect; but continue your treatment year after year, and the improvement will be gradual, and possibly marked. Wood-ashes, as also sifted coal-ashes when mixed with wood-ashes from kindling, etc., usually have a striking effect in improving the soil.

Mr. Grundy Says:

DO NOT BELIEVE A MAN is a rascal until he proves himself to be one. At the same time it is a good idea not to allow him any opportunity to prove himself one at your expense. Many a man is honest until he gets a chance to be otherwise. Pay as you go, and collect on delivery, and your financial troubles will be few and far between. Establish a cash reputation and you will have no need to ask any man to indorse your note, and you can with good grace decline to indorse a note for your neighbor.

CORN.—In looking down the rows of young corn to-day I wondered how many farmers' boys have learned what there is in a grain of corn. The boy who learns this is certain to take vastly more interest in the crop than he who sees in it only food for horses, cattle, sheep and hogs. From corn a long list of articles are made, and chemists are still seeking for more, with good prospects of finding them. Among the leading products of corn are flour, sugar, starch, whisky, beer, corn-oil and table-syrup. Besides these there are over thirty other by-products. The exports of these by-products of corn run up into millions of dollars annually. It is safe to say that corn will never again be produced at a loss. I have seen thousands of bushels sold at ten cents a bushel, and thousands more at fifteen to eighteen cents a bushel. But that was when its only uses were for stock-food, whisky, and for human food in the form of coarse corn-meal. Corn is the greatest cereal we produce, and a partial failure of the crop affects more interests than would the failure of any other crop. The improvement of this cereal and the production of maximum crops is worthy of the closest study of the brightest minds.

SECRETARY F. D. COBURN, OF KANSAS, has issued another of his invaluable reports, entitled "Kansas Wheat-Growing." On the first page of the cover he says, "There is not on the vast expanse of the globe a savage or semi-civilized nation that cultivates the wheat-plant." There is something in that for ministers of the gospel, missionary societies, philanthropists and all who have the greatest good of all mankind at heart to think about. The book is, like all of Secretary Coburn's reports, very interesting all through not only to Kansas wheat-growers, but to everybody else who grows wheat. I must say that the farmers of Kansas are indeed fortunate in having such a man as F. D. Coburn, Secretary of their State Board of Agriculture. He is one of the men who have labored for years to raise the standard of farming, and to increase the respect of the farmer for himself and his vocation. Under the teachings and inspiration of such men as Coburn the farmer soon ceases to regard himself as a "clodhopper," and farming as drudgery. He is led to see possibilities in agriculture of which he never before dreamed. He discovers that it is a science that calls for active brains as well as muscles, and as his knowledge of it increases, the field broadens and the incentive to study the problems presented and seek for better methods is with him constantly. This is what makes the progressive farmer, and the progressive farmer is a good neighbor, a good citizen and an inspiration to all about him.

POST-TIMBER.—In a late number of the FARM AND FIRESIDE was an excellent article on growing locusts for fence-posts. I well remember a beautiful grove of locusts that stood on my father's farm nearly forty years ago. There were about six acres in the grove, and the trees were twelve years old when father bought the farm. The seed had been sown in drills five feet apart, and the trees stood from two to six feet apart in the rows in part of the grove, and were as straight as canes. A prairie-fire had killed many of the trees in the south half of the grove, and here the blue-grass grew luxuriantly. Six years after father bought the farm borers attacked the grove, and killed every tree within four years. There were several other locust groves in the neighborhood, and all were destroyed by the borers, which multiplied at a rate that precluded all possibility of fighting them. Were it not for this destructive borer I would recommend the locust highly, for it makes excellent fence-posts. As it is, I would advise farmers to go slow in planting it. As to the Osage orange, which some writers praise very highly as post-timber, I would not plant it at all if I lived north of latitude thirty-nine. I understand it does very well below that latitude, and makes fine, large trees. The principal objection to it is the hardness and great weight of the wood. When dry it is almost impossible to drive nails or staples into it, and where driven in while the wood is green it usually checks, so that they fall out in a year or two. In my immediate neighborhood there are two small groves of Osage orange, or Bois d'Arc, as it is sometimes called. Both were planted for post-timber, and one is eighteen and the other fourteen years old, and neither has proved satisfactory to the owner. About half of the trees in the older grove will cut one post and one stake now, but many of them would be very crooked. I am satisfied that Catalpa speciosa would have been far more satisfactory for the purpose.

There is another tree that I would plant largely of on rough hillside land, and that is red cedar. It is quite a rapid grower, makes a strong, hardy wind-break—that is, a real wind-break in both winter and summer—and it makes first-class posts. A local lumber-dealer has just received a car-load of red-cedar posts from Tennessee, and is selling them at from forty to fifty cents apiece, according to size. That seems to indicate that red cedar is a good tree to plant. If I were reforesting rough land I would plant more of Catalpa speciosa and red cedar than of all other kinds. It would pay. Seedling trees can be obtained from the nurserymen who make a specialty of growing forest-trees. They send one-year-old seedlings by mail, in season, for a very low price.

All Over the Farm

CLOVER HAY

THE keep of farm-teams is costing money this year. Grain is a cash article, whether purchased or grown upon the farm. Scientists have figured out that clover hay should furnish a horse or cow quite a well-balanced ration, and many a farmer is wondering what ails the figures, experience having taught that clover hay without grain will not keep a team in good condition at hard work. It will pay to think this matter out right. The clover contains the food-elements in the proportion the scientist states, but with them is too much bulky, indigestible stuff to make clover hay alone a fit feed for the horse which has a small stomach and limited time for eating. More than this, the clover fed alone has too free an effect upon the digestive organs. While good clover hay has about the right proportion of food-elements in it for the working-horse, it is not a perfect food, for the reasons stated. It can, however, be made the basis of a ration for horses at moderate work, with great saving of grain, if judgment is used. Being bulky, some more concentrated food—in the form of grain—should be given, and if it is binding, like corn, so much the better. A little old timothy should be added. In this way the new clover hay of this year can be made to displace half the grain ordinarily given to farm-teams. It should, however, be good clover. The cutting should be in full bloom, and the curing should be done in the windrow and cock. That prevents the leaves from becoming dusty. The man who has not fed early cut and perfectly cured clover hay is not a competent judge of its value. Over-ripe or overcured clover is utterly unfit for a horse, while good clover approaches grain in value.

CLOVER AND THE SOIL

The clovers are seeded as a rule primarily for the improvement of the soil. The question often is asked, "Are we not robbing the land when we take the crop off for hay?" In the case of medium red clover that depends, in great degree, upon the time the crop is made into hay. If the plants ripen the first crop fully, the second crop will usually be comparatively light. To get the fullest benefit from clover the first crop should be clipped before it comes into full bloom, and left as a mulch. A second crop will come quickly, and the treatment may be repeated, the mulch insuring a third crop, because it retains moisture, and there is a big root-growth and accumulation of organic material on the surface. This may pay for thin land whose improvement is the one consideration, but ordinarily the first crop can be made into hay without serious loss to the soil if only the mowing is done early. The plants have not exhausted themselves maturing the crop, and it is sufficiently early in the season for rapid growth of a second crop.

It is the practice in some sections to plow down the first crop of clover when fully mature, the belief being that this gives the maximum benefit to the land. I am sure that the practice is not wise. The roots of clover make their full growth when maturing the last crop, and this additional growth, as well as the material in the second crop, is lost by breaking the land in early summer. It is better to mow early, and if the feed is not wanted, let the crop mulch and fertilize the land while more material is being produced. But usually it pays to save this first growth for feed, and the manure can go back to the parts of the field needing it worst. The breaking of a clover sod in early summer curtails the benefit to be received from clover, and in warm latitudes there is danger of souring the land.

CATALOGUE DECEPTION

Friends complain that they are the victims of seedmen's deceptions, having ordered new kinds of forage-plants only to find that they are worthless. There are two sides to this matter, and disappointment may be due in part to lack of good judgment. In recent years much attention has been given to new forage-plants, both on account of the effects of drought on staple crops and on account of the general demand for protein crops. There are portions of the United States where neither corn nor timothy do well, and a new crop may be a valuable acquisition to them, while nearly valueless to our own locality. The dry soil, the wet one, the clay, the sand, the thin soil—each one has plants best adapted to it. We know the facts concerning the old crops, and can use them with judgment on our various soils, leaving some entirely alone because they would not pay us at all, although very valuable elsewhere. The seedsman uses the reports from a new forage-plant grown where it does its best—he may exaggerate even the most glowing report of success—but the individual farmer must select for his own soil and climate, and must not suppose that any new plant advertised is adapted to every locality. There would be less disappointment if every one bore in mind that seedsmen advertise the results gotten under the most favorable conditions, and it may be impossible or unprofitable to make local conditions favorable to the particular crop that attracts our attention in the catalogue descriptions.

DEPENDING UPON OUR STATIONS

In respect to both new crops and new varieties there would be far less disappointment and loss if our farmers would seek the advice of the experiment stations before investing their money. These stations are equipped for testing new things. The men in charge are experts, and they have money at their disposal for experimental work. Even if any one among them were not absolutely honest, and might otherwise be inclined to favor some worthless novelty, there is no danger that this would be done, because it would be at the expense of a reputation that has cost years of work to build up. As a matter of fact, a wide personal acquaintance among such workers has shown that they are a conscientious class of men, and one can go to no safer quarter for advice. Trained along their lines they can detect many of the frauds among catalogue novelties without any testing at all. They test many of the promising novelties before there is sufficient supply to place upon the general market, and the day has gone by when it is necessary for a farmer or fruit-grower to spend some money upon frauds or fall way behind the procession. The man who is introducing something that our experiment stations know nothing at all about is a man to leave alone. If he had had anything of superior merit he would have permitted and desired experiment-station tests while growing his supply of stock. If fruits, vegetables, grain and grasses, spend no money for that which your experiment-station experts cannot recommend for trial in your locality. Write your state experiment station freely, and let it serve you free of all charge to you. DAVID.

FIGHTING THE CHINCH-BUG

As the wheat matures the bugs will leave this crop in search of fresher pastures, and will probably attack neighboring fields of oats or corn. The chinch-bug is especially fond of millet and similar grasses, and a farmer who finds his wheat-fields infested will do well to sow a narrow strip of millet between the wheat and his other crops.

As the proper time for sowing millet is during, or just after, the corn-planting season, a strip of millet two or three yards in width may be sown along the side of the corn-field next to the infested wheat or oats. When the bugs have taken possession of it the millet may be plowed under with a jointer plow, and the ground harrowed and rolled, thus burying the bugs.

The progress of the bugs from field to field may also be obstructed by making a V-shaped trench with the corner of a hoe, and filling it with coal-tar, the tar to be renewed as soon as it becomes crusted over. Another method which has been suggested is to plow a deep furrow across their track. The bugs which get into this furrow will have difficulty in getting out again, and they may then be killed by sprinkling them with kerosene emulsion made as follows:

Dissolve one half pound of soap in one gallon of water, and heat to the boiling-point; remove from the fire, and while hot add two gallons of coal-oil, churning the mixture with a good force-pump for fifteen minutes, or until it resembles buttermilk. To each quart of this emulsion add fifteen quarts of water, and apply with a spray-pump or sprinkling-pot.

This emulsion may also be used where the bugs have attacked the outer rows of corn, using a spray-pump and throwing it with sufficient force to wash them off the corn.—From Bulletin of the Ohio Experiment Station.

CARING FOR THE GRASS CROP

Considering the value of the grass crop in this country many of us do not give the care we should to securing it. Many tons are put into the barn every year in such a condition that it is not fit to feed to any animal. Horses are especially susceptible to the ill effects of feeding musty hay. No doubt hundreds of them are permanently injured for all purposes by eating poorly cured hay.

The cutting and curing of grass are subjects that require close attention. One of the first essentials to success is that we should be ready to begin mowing when the grass comes into the first bloom. Then the stalk is sweet and full of rich juices. Later in the season these juices harden and turn into woody fiber, that makes the stalk harder to chew and much more difficult to digest than if it had been cut in time.

From the twentieth of June to the fourth of July, then, according to one's geographical location, we should begin cutting our timothy. Starting out with the mower in good condition when the weather bids fair to be good, cut down as much grass as may be put in the next day in the afternoon with the force at command. Begin slowly and carefully. The teams will be fresh and not hardened to the steady work in the hot sun. The grass cut down in the morning of the first day should lay out in the sunshine until the afternoon of the same day. Then start the rake. Men may follow at once, putting the windrows into cocks, which ought not to be too large at this season of the year. If the sky is fair and the likelihood is for a good day to-morrow, no particular care need be given to the method of putting up the hay. In threatening weather the matter presents a different phase. Every haycock should be shaped, so far as possible, to shed water. Not one man in ten can, or will, do this work properly. Still the requirements are not many. The hay should not be rolled. It must be stacked up, one forkful placed carefully on the top of another, and pressed down compactly. The top should be quite sharp. Hay thus arranged will stand rain well.

The next day start the mower again in the morning. When the dew is off set men to opening out the haycocks put up the day previous. This, too, requires care. The hay should be spread out thin, so that air and sunshine can freely circulate through it. By two o'clock of a bright day this hay will do to draw. A couple of hours later that cut in the morning may be raked. And this is the story of a crop of good, bright hay. After the season advances, so that the grass is a little riper, if the weather be fine we may get in in the afternoon of the same day the grass cut in the morning. This is much less work than the other way; but at first good hay cannot be secured in any better way than that herein described. Such hay will keep indefinitely, and come out as bright as a dollar. E. L. VINCENT.

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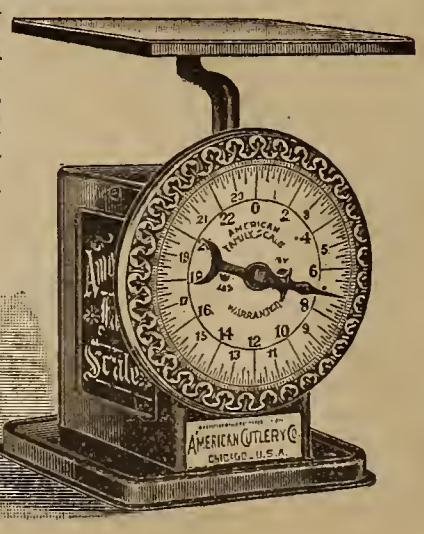

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Address FARM AND FIRESIDE, Springfield, Ohio

In the Field

NEW lines of agriculture are opening up in all parts of the country. Iowa, the great corn, pork and beef producing state, is now adding other branches of production. Grimes is to have a "Grimes Canning and Preserving Company," with a capital of two hundred thousand dollars.

Two school-teachers at Owosso, Mich., who are interested in sugar-beet culture have employed forty young men who are scholars of the Owosso High School to work for them during the summer, the price agreed upon being one dollar and fifty cents a day. The plan is a novel one, and is likely to be of advantage to both parties.

Dr. S. A. Knapp, special agent of the United States Department of Agriculture, who has recently returned from Japan, has secured a large amount of rice called "Simyl," which is known to ripen in seventy days. The introduction of this variety will render rice-growers less liable to lose their entire crop on account of the August and September storms. Five or ten days gained may save the entire crop from being ruined. Lake Charles, La., is to have an immense paper-mill erected this season for making paper from rice-straw.

Bulletin No. 17 of the Department of Agriculture mentions a comparatively new variety of the cow-pea called the "Iron" cow-pea, which the experts of the Department tested last season on the farm of Mr. T. S. Williams in South Carolina. The other well-known varieties were almost wholly destroyed by the "wilt," or root-nematode, a disease common on the so-called pea-sick lands of South Carolina. The seeds of the "Iron" cow-pea are small and hard, and are of a buff color. It is of the "Clay" type. It is likely to prove a valuable acquisition. This is another instance of the importance of scientific investigation to the plain farmer. * * *

ALFALFA

In the April 15th issue of the FARM AND FIRESIDE I had something to say about farmers trying alfalfa along with their other crops. Now, as alfalfa is good to raise as a sure crop in dry seasons, and a paying crop in any season, I wish to hammer away at that class of farmers who are slow in taking hold of new things.

Many farmers say they are getting too old to start alfalfa; others say the seed is too high, etc. I earnestly say the best little field you have on your farm is none too valuable for you to sow to alfalfa. Most Western farmers, and also Eastern farmers, are continually sowing millet, sorghum, etc., for rough feed. Remember, you are buying the seed every spring, plowing and harrowing every spring, and at best you get but one crop a year. With alfalfa you plow but once, and buy seed but once; after that you cut three to five crops a year.

If you do not know just what alfalfa is, let the cows have all the alfalfa hay they want in the winter, and see whether they do not give milk like they do when on a good pasture. For brood-mares or hogs it is especially good. Can you, as a wide-awake farmer, imagine any crop surer than a field of alfalfa about six inches high in April, and a bunch of brood-sows with their pigs grazing on it while corn is seventy-five cents a bushel? W. L. SEELING.

Correspondence and Comment

FROM COLORADO.—I live on the western slope of the Rockies, twenty miles northwest from the Rio Grande River, in a fine valley, where it is not too hot in summer or too cold in winter. Beef-cattle is the principal business although plenty of grain is raised. Potatoes yield from six to ten tons to the acre; oats, forty bushels; winter wheat, thirty, and spring wheat, twenty-five to twenty-eight. Alfalfa, cut three times, yields from one and one half to two tons each cutting. The land is all taken up in the valley, and is worth from twenty dollars to forty dollars an acre, according to improvements.

Highmore, Garfield County, Colorado. H. V. C.

FROM IOWA.—The outlook for grazing in the pastures looks rather slim. The intense heat of last summer and the continuing dryness have killed out a good deal of grass and clover. Corn, oats, barley and rye are our main crops. There is not much wheat raised here. Potatoes and vegetables are generally a good crop. Nearly all are engaged in cattle-raising, dairying and swine-raising. Land is rising in price very rapidly, and is now worth from fifty dollars to seventy-five dollars an acre. There are quite a number of farms for sale here. A good many people sell their farms and retire from farming and go to live in the cities, while others go farther west, where they can buy cheaper lands and more of it for the money invested. There are good markets here for every sort of produce.

Gilbertsville, Blackhawk County, Iowa. P. W. K.

FROM OREGON.—Wallowa County, situated in the northwestern part of Oregon, is as large as several of the New England states combined, yet has a population of less than six thousand. There are thousands of acres of government land yet to be taken, though as a matter of course the very best land has been taken up. In the county are five towns; namely, Joseph, Enterprise, Lostine, Wallowa and Flora. Joseph is the largest town, having about five hundred population. It is located at the foot of a beautiful and picturesque mountain lake, in the most fertile section of the county. Well-cultivated farms produce abundant yields. Besides farming, cattle and sheep raising form the principal industries. Gold and silver, copper and lead and some of the more precious stones abound. In the valley of the Imnaha the finest fruit that is found anywhere is raised. L. C. H.

Joseph, Wallowa County, Oregon.

FROM UTAH.—Utah is very mountainous. The Wahsatch range cuts it up, leaving valleys that are level and fine for irrigation. Sugar-beet raising is the coming industry of Utah, the soil being excellent for beets. Land in Bear River Valley is rising rapidly. It can be had now for from fifty dollars to one hundred dollars an acre. There is some sage-brush land yet for sale. The people in this valley are about half Gentiles and half Mormons. It is a new country, having been settled about four years. Methodists, Baptists and Presbyterians all meet in our district-school house, and have church and Sunday-school every Sunday. As for climate this state is unexcelled. The air is pure and dry in the summer, and there is some rain in the winter. We have no fearful storms, and the nights are cool all summer. Wages are very good for hired help, ranging from twenty-five dollars to forty dollars a month. Alfalfa yields from four to eight tons to the acre in three cuttings. G. W. S.

Bear River City, Boxelder County, Utah.

Gardening

By T. GREINER

For Cabbage-lice.—Kerosene emulsion is good for lice on all plants. Or you may try tobacco-dust. A forcible spray with hot water will also clean the plants from the undesirable visitors.

Hollow Celery.—Several causes may lead to hollow celery—poor seed, poor culture, etc. Plenty of potash and phosphoric acid in the soil will be most likely to prevent the appearance of hollow stalks.

Cauliflowers Not Heading.—G. W. G., of Canal Fulton, Ohio, complains that his cauliflowers, planted on good fertile bottom-land and well taken care of, have failed to head. Cauliflowers often disappoint us in this respect. Plant seed of a good strain, and put plenty of potash in your soil.

As "Ram's Horn" truly says, "No amount of pruning will make peaches grow on fence-posts." And no amount of cultivation will make really fine specimens of tomatoes grow on plants grown from seed of a poor variety. I would grow the plants I wish to set, even if they were to cost double what apparently good plants, but of unknown parentage, could be bought for.

Garlic-growing.—Mrs. O. C. R., a reader in Ohio, asks for information about growing garlic. This is a native of southern Europe, and mostly grown in warmer countries. The bulb is composed of several separable parts, or bulblets, called cloves. These cloves are planted as onion sets are, in spring (or fall in the South), usually four to six inches apart in drills, in ordinary garden-soil. Sometimes the tops are broken down in the same way as at times recommended for onions, in order to make the bulbs all the better. The bulbs mature in the summer or fall.

The New Horse-radish.—The Department at Washington forwarded to me this spring, on request, some sets of the Maliner Kren, a variety of horse-radish from Malin, Bohemia, which is said to be the variety which brings the highest prices in the European markets. But just think of the following directions for planting it: "The cuttings are planted almost horizontally in the ground, about fourteen inches deep. Only one shoot is allowed to develop on a cutting, the others being removed. This one shoot becomes sufficiently large during the season to be harvested in October or November. It is carefully cut from the original cutting, leaving the latter undisturbed in the ground, where in succeeding years it will send up other shoots." I planted the sets, following the directions.

Black-rot of Tomato.—It is easy enough for our official advisers to tell us that spraying with Bordeaux mixture is good for the black-rot of tomatoes. But who wants to spot the fruit all up with Bordeaux mixture? The free use of stable manure surely has a tendency to increase the rot attacks, and commercial concentrated manures are therefore safer to use. I know of no treatment that seems to be a sure protection against rot attacks, and would rely more on selection of variety than anything else. Yet the variety that appears to be rot-proof one season or in one place is often seriously affected another season or in another place. Imperial has usually proved as subject to the disease as any other. Some of the dwarf upright sorts, like Dwarf Champion and others of that type, are also quite liable to be attacked.

Fruit-Growing

By S. B. GREEN

Grafting the Hickory.—G. D., Virginville, Pa. Shellbark hickory can be grafted, but it requires great care. Grafting succeeds best when done just as growth starts vigorously and at the end of the small branches of the preceding year. It does not do well grafted on old wood. It is a good plan to cover the graft with oiled paper to prevent evaporation until the scion starts.

Ants Around Trees.—J. H. A. S., Adams Run, S. C. Where the ant-hill can be found, ants are quite easily killed by using bisulphid of carbon. This material resembles gasolene in appearance, and is explosive, but if fire is kept away from it it is not dangerous to use. It evaporates rapidly, and the vapor is death to any animal life inhaling much of it. For this purpose a hole should be made in the top of the ant-hill, and about four teaspoonfuls of the fluid sprinkled in, after which it should be covered over with a sod and piece of cloth, or in some such way prevent the vapor from escaping. Where convenient it will be found that scalding water is beneficial, and a small amount of kerosene will often drive them off, but of course it would not do to use kerosene on the roots or trunks of trees.

Buffalo Tree-hopper.—Among the insects recently received for naming is the buffalo tree-hopper. Most of them have come from Western states. This insect is seldom observed, but the injuries from it are often very evident on the older branches of apple-trees. These injuries consist of a series of pairs of elliptical slits opposite one another, and repeated perhaps many times on the branch, until it has the appearance at first sight of having been pounded with hail or something of the sort. These slits make the branches weak. A careful examination of these wounds at this season of the year by shaving off the tops will reveal the presence of eggs massed in each of them. These egg-masses hatch out in May and June into peculiar-looking hoppers, which live mostly upon the under side of the leaves. These gradually grow by sucking the juice of the plants until maturity, when they lay their eggs under the bark. The best remedy is probably to cut off and burn the infested wood before the eggs have hatched. If hoppers are abundant whale-oil-soap solutions should be applied in summer.

Monila—Injured Currants.—W. A. H. Your plums rotted on the tree because they were attacked with the fungus disease known as the Monila. This disease attacks the plums in summer, causing them to dry up and to remain shriveled on the trees over winter. These shriveled plums have in them the fungus that will spread the disease the next year. One of the best remedies for this trouble is to remove all the diseased plums from the trees during the winter, and then to spray the trees with Bordeaux mixture, made of five pounds of lime, five pounds of bluestone and twenty-five gallons of water, just before the buds swell. Care should be taken to cover the trees thoroughly with this mixture. After the fruit is set spray with Bordeaux mixture made in the same way, but with three times as much water. If used much stronger it is liable to hurt the foliage. —I think that you will be able to prevent the injury to the fruit-clusters of your currants by spraying them, as soon as the fruit is set, with Paris green in water, at the rate of one pound of Paris green to one hundred and fifty gallons of water. If you have only a small patch of currants use one teaspoonful of Paris green to a pail of water, and take special pains to get the spray on the fruit.

Plain Facts FOR Fair Minds

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1—Land enough in fee simple, on Spindle Top Hill, near Beaumont, Texas, to accommodate fully forty first-class "Gushers." Two wells already completed show an undoubted production of 180,000 barrels of oil per day. One of these is a nine-inch well, and enjoys the distinction of being the largest oil well in this country. The other is an eight-inch well, and shows tremendous pressure, making the yield of oil very large. Two more eight-inch wells are nearly completed, and at least two drilling rigs will be kept constantly at work on this Spindle Top tract.

2—More than 12,000 acres, in fee simple, of well-selected oil lands outside of Spindle Top Hill in Jefferson and Orange Counties, Texas, and Calcasieu Parish, Louisiana. These lands are believed to comprise the very best oil-producing territory in that region except Spindle Top itself. Much of this large tract is also good rice land, and considerable of it is now under cultivation. The company owns eight miles of water front on the Sabine River and Lake, in Orange County, on the upper part of which it is building its large plant for refining Texas oil. This tract of land contains several shell banks, and one of these in particular is conservatively estimated to be worth fully three hundred thousand dollars to the company.

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4—Eleven thoroughly equipped drilling rigs and complete outfits, including an immense amount of the best iron pipe.

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6—The Forward processes and patents for refining crude petroleum, especially adapted to the heavy asphaltum oils of Texas and California.

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	No. of Gallons.	Value per Gallon.	Value Finished Product 100 Barrels.	Value per Gallon of Oil with which it will be in Competition.
10 per cent Asphalt, 3,360 lbs. (8 lbs. to the gallon) at $30.00 per ton	420	12c.	$ 50.40	15c.
15 per cent Heavy Cylinder	630	30c.	189.00	35c.
18 per cent Heavy Engine Oil	756	15c.	113.40	20c.
17 per cent Machine Oil	714	12c.	85.68	16c.
21 per cent Intermediate and Neutral (average)	882	4c.	33.28	4c.
15 per cent Kerosene	630	6c.	37.80	6c.
3 per cent Naphtha	126	7c.	8.82	7c.
1 per cent loss	.....	.....	.....	.....

100 per cent Total Value 100 barrels	$ 518.38	
Total Value of Output of Refinery, Capacity 2,500 barrels daily		$ 12,959.50
Cost Crude Oil—20c. per barrel	500.00	
Cost refining 2,500 barrels at $1.00 per barrel	2,500.00	
Cost barrels and packages	1,250.00	
Cost Marketing, Insurance, Interest, Depreciation, Repairs, Office Expenses, Salaries, etc	2,500.00	
Total Daily Cost		6,750.00
Daily Profit		6,209.50
Profit for year's operation—300 days		$1,862,850.00

Or 37.25 per cent on total capitalization, $5,000,000.00.

7—A refinery of 2,500 barrels daily capacity, now well along toward completion, on the Sabine River, in Orange County, Texas, including various accessory shops and factories; namely, brick plant, cooperage department, machine shop, boiler shop and acid plant. It is definitely expected that this refinery will be in complete operation not later than October 1st, and **the most conservative figures** show that it will earn annually fully 35 per cent on the entire capital stock of the company, to say nothing of the great earning power of the company's production and fuel-oil department. The cooperage department will be furnished with first-class material at lowest cost from choice timber lands owned by the company in fee simple.

The above is the briefest possible statement of the property and earning capacity of the company, and does not convey an adequate idea for the whole truth by any means. Further particulars will be cheerfully furnished upon application at the Company's Cleveland office.

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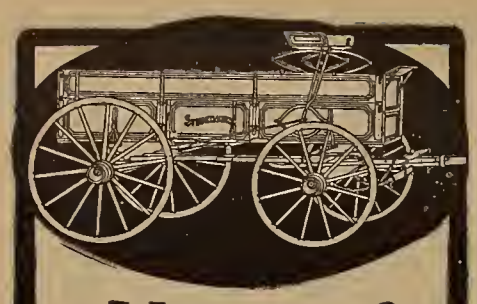

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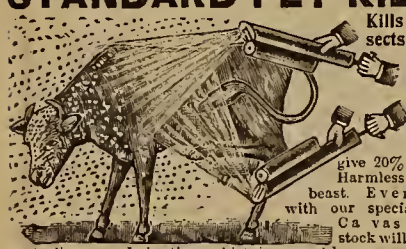

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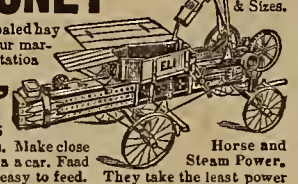

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Live Stock and Dairy

A COW'S RATION

The dairyman often is asked to name materials in the right proportion for a profitable ration for a cow. This is an unreasonable request. The selection of materials depends upon the home supply, the prices of those on the market and the taste of the cow. The amount of the ration depends also upon the individual cow. But there are a few things that can be accepted unquestionably.

First, the cow needs succulent food. The production of milk demands succulence in the feeding-ration. This is secured in summer in pasture-grasses and forage crops. Years ago the pasture was considered all-sufficient, and the cow was expected to drop in her flow of milk when hot, dry weather cut the supply of good grass, but the progressive dairyman no longer depends upon pasture alone. This would do if the pasture was only half stocked, but that would not pay. The summer forage crop comes in to supplement the pasture. The grass carries the cows until August, and then, when they should not be compelled to put in much time hunting feed in the heat, the succulent forage crop supplies them with feed in cool, dark stables during the middle of the day. Cows thus treated maintain a pretty even flow of milk throughout the summer. Canada peas and oats, sorghum, sweet-corn and cow-peas are among the best soiling-crops.

The winter ration demands the succulence as well as does the summer one. Beets and other roots furnish this, but at greater cost than silage. The silo is an essential to the most profitable production of milk. It passed the experimental stage ten years ago, and silage is the basis of the ration for cows in nearly all up-to-date dairies.

Second, farm feeding-stuffs must be used largely on most dairy-farms, and the leading one—corn in some form—is deficient in milk-making properties. It is a splendid base for a ration, especially when in the form of silage, but some protein, or blood-making material, must be added to it. Bran and other such by-products of manufacturing bring us this element, but they have become so costly that it is time to plan for the growing of some protein crops. We can use clover hay, pea-vine hay, Canada-pea and oat hay, and other winter feed from legumes, and thus cut down the bran-bill.

Third, in buying by-products the physiological effect upon the animal is a consideration. Cotton-seed meal is constipating, but when fed in connection with silage a considerable quantity can be used with safety. Gluten-meal is good for milk, but a relatively big quantity of it injures the quality of butter. The character of the product and the kind of feed provided by the farm affect choice of purchased feeds.

Fourth, no one can safely fix the quantity of a profitable ration for a cow without testing her capacity to use the feed. Each animal should be fed according to her ability to convert feed into milk or butter at a profit. There is a limit, that must be determined. But succulence, a fair amount of protein in hay from legumes and in by-products, and a good supply of mineral matter, as in oats or bran, are demanded by all cows for best results. D.

CALF-FEEDING

Passing through a part of the country recently where a good many calves were being raised by hand I noticed the different methods, and lack of methods, in vogue. At one place a number of calves were fed from a trough, and I could not see why that farmer didn't know the cause of his unhealthy calves. They were not doing well at all, and one look at the trough was enough to show the cause; it was long and shallow, had not been cleaned for months, and altogether was not fit to feed pigs from.

At other places the men would take two buckets apiece full of milk, call the calves around them, and start in. Two calves would put their heads into one pail, and while the man was getting them out several calves would upset the other pail, and the little, weak ones did not get any.

When I came to the place I will describe it was with a feeling of relief that I watched the calves fed, and was able to admire as pretty skim-milk calves as I ever saw.

This man had built a row of small stanchions at one end of his calf-pasture, as near to his creamery as possible; they were built of inch lumber, and were about three feet high and quite close together—in all respects very much the same as his cow-stanchions. They were set right in line with the rest of the pasture-fence, forming two sections of the fence, of ten stanchions to the section, so that the calves could only come up to the side opposite to where the men stood with the milk.

On the side outside of the pasture a frame had been built in which to set a galvanized pail before each stanchion. He had made this frame by using a six-inch board, set on edge, placing it a foot from the base of the stanchions, and nailing two-inch crosspieces from the base-boards to the top of the six-inch piece, forming a box for each pail, so that it could not be upset.

The calves were standing ready to be let into their places when feeding-time came, and every one was put in and fastened by a drop-stick on top of the stanchions before any of them were fed. Care must be taken to have the openings far enough apart so that one calf cannot reach over into his neighbor's pail.

As soon as the calves were in place the warm milk from the separator was brought out, and each pail filled with the amount required for the calf it was meant for, a little linseed-meal put into the milk, and the pail set into the box before the calf.

In this manner one man was attending to twenty calves, and each and every calf was receiving individual attention; the slow drinkers were getting their full share; none of them were getting two feeds; no milk was being wasted; the calves were not being kicked over the heads, and the feeder was not being tempted to use strong language.

After the calves were through, every pail was taken out, rinsed in running water, which was right at hand, being run from a near-by creek in small troughs for this very purpose, then placed upon their sides—not turned upside down—in a rack built right above the stanchions. In this way the pails were always clean and sweet.

The farmer showed me the arrangement he had for his calf-feeding in the winter. The two sections of stanchions were moved into one end of his calf-shed, and here they were fed in the same manner. Along one whole side of this shed he had racks made to hold his hay for the calves, about two feet from the ground, and made of poles, from between which the calves pulled what hay they wanted, and did not waste it nor trample it under foot.

Along the other side were shallow feed-boxes, from which he fed bran and chopped feed, and he stated that his winter calves turned out just as well as the spring calves under this treatment. G. B. T.

Swelled Leg.—I. P. K., Eagle Foundry, Pa. If there is no lameness, and the wound has healed, exercise the mare every day, keeping the swelled leg bandaged with a smoothly applied bandage of woolen flannel. Invariably begin bandaging at the hoof. Keep up this treatment until no more reduction is effected by the exercise. Most of the swelling, if not all, will undoubtedly be removed, while some of it, probably but little, may remain and become permanent.

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Live Stock and Dairy

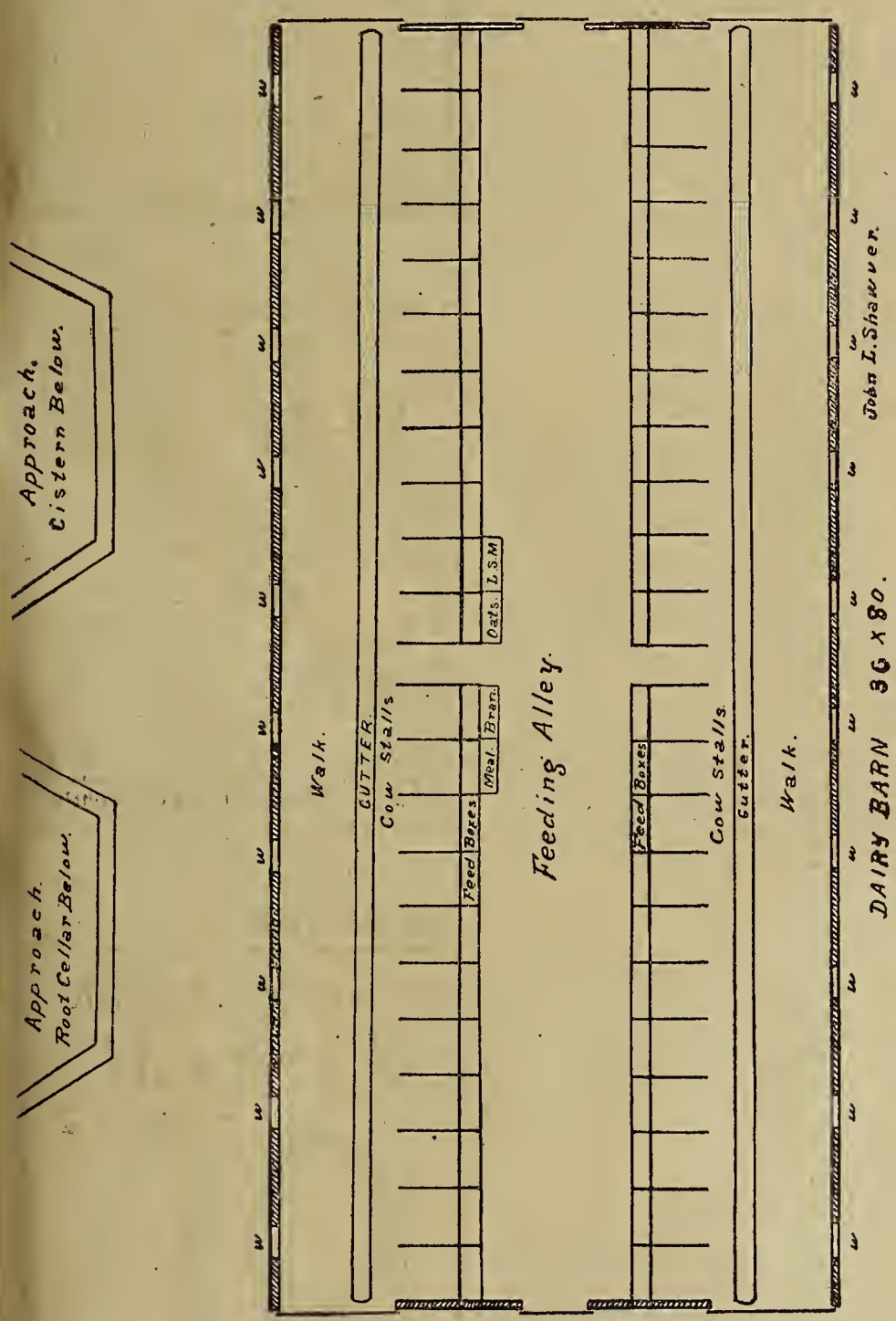
A DAIRY-BARN

THE dairymen have long been the most progressive of our agricultural classes. They have endeavored to stock up with animals that had been proven adapted to their needs, and which had demonstrated their ability to pay for the food and care bestowed and leave a margin for profits.

They have studied the chemistry of food, and arrived at definite conclusions as to the relative feeding value of the various crops produced upon the farm and what was needed to be purchased to make up the so-called balanced ration.

They have found that good cows cannot be expected to give best results unless they have comfortable quarters, and that good feed may be almost thrown away even on well-bred cows if they must face the inclement weather of winter. It is self-evident, then, that a good, comfortable barn is one of the chief factors that contributed to the results attained by the successful dairyman.

It has been the lot of the writer to visit many dairy-barns in Ohio and other states, and he has had hundreds of barn-plans submitted for his inspection by



dairymen throughout the states and the Canadian provinces, but when everything is taken into consideration there is no plan that, for convenience, excels that accompanying this short sketch.

The plan shows a barn thirty-six by eighty, with two rows of cows facing the feed-alley, through which a silage-car or feeding-truck may be run from silos just outside the barn at the end.

The grain feed may be in bins on the floor above, and conducted by spouts to the small boxes at one side of the feeding-alley.

The main floor is divided into five equal spaces of sixteen feet each—three bays and two floors, one of which may be used for hay or grain.

If root crops are grown, a root-cellar may be built in one of the approaches, and a large cistern built in the other, unless water is supplied from a well.

The basement should be papered and sided on the outside with tongued and grooved siding, and papered and ceiled inside.

The windows should slide horizontally.

The stable may be cleaned by means of a drop-carrier on a track overhead, or a dump-cart may be driven through from end to end.

The basement should be at least eight feet. Ventilating-flues should start about twenty inches from the floor, and extend upward with alternate posts and roof arches to the comb, and there connected with metallic flue.

The superstructure may be twenty feet, with gable-roof one third pitch; or if sixteen-foot posts are used, a curb-roof with three fourths and one fourth pitch will give the same storage capacity.

Slate seems to be the most desirable roof, owing to the poor quality of most of the shingles on the market at the present time. The first cost of the slate is slightly greater, but the durability is much more in proportion.

The basement floor should be cemented throughout. The main floor is made of two layers of boards, with tarred paper between.

One of the best dairy-barns in Ohio is that of Kelley Brothers in Clinton County, which is thirty-six by one hundred and eighty-eight, and fitted up in modern style. JOHN L. SHAWVER.

DON'T YIELD THE MILK WHEN MILKED.—T. G., Olathe, Kan. Your cow has probably experienced some unkind treatment while being milked, and prefers to keep her milk for her calf to letting the milker have it. You will probably succeed in getting it if you milk her crosswise—namely, the left fore and the right hind teat together, and vice versa. Try it.

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The Household Gives invaluable recipes for renovating and cleaning all kinds of household articles, including the recipe for the wonderful "Magic Dirt Annihilator," recipes for the laundry, for repairing and polishing all kinds of articles, for the destruction of roaches, bugs, flies and other household pests, household miscellany of dozens of splendid formulas and secrets.

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General Trades The baker and confectioner, including recipes for making all kinds of candy, ice-cream, sherbets and water-ices, valuable recipes for making syrups and flavors, medicinal liquors and beverages, including formulas of the utmost value, telling how to make scores of tonics, bitters and cordials that can be sold at immense profit, various recipes for the sick-room, the manufacture of glues, cement, mucilage, paste, sealing-wax, solders, alloys and rare and valuable compositions. Also polishes for leather, hints for trappers and hunters, how to stuff birds and animals, the manufacture of paints, stains, varnishes, japans, and recipes for the farrier.

Toilet Articles How to make perfumes, distilled waters and oils, sachet-powders, skin preparations, cosmetics, preparations for the hands, nails and feet, hair-restoratives, tonics and washes, curling-fluids, pomades, preparations to use in shaving, tooth-powders, washes and pastes, and toilet and medicinal soaps.

Chemical Preparations Inks, ink-erasers, gildings, copying-pads, gold and silver plating powders, fireworks and explosives.

General Miscellany Formulas of great value and usefulness not included under the other departments. Includes a large number of extremely valuable secrets, such as etching on copper, manufacture of celluloid, artificial ivory, molds and dies, etc. Peculiar experiments, hints on patents and inventions, and many other articles of the greatest interest and of measureless value.

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We will send this wonderful Recipe Book free, post-paid, for sending one yearly subscription to the Farm and Fireside, or

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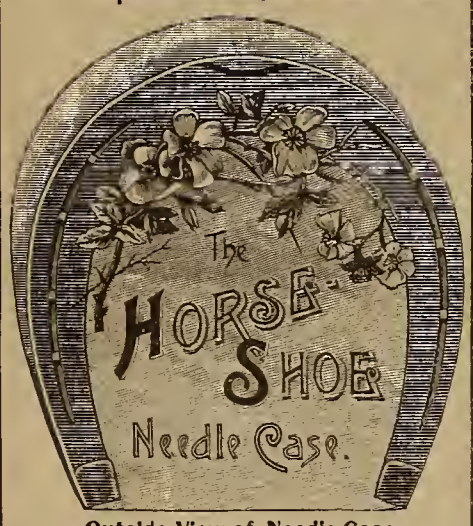

Outside View of Needle-Case
Very much reduced in size.

Every woman will appreciate this useful and handsome article. The case is

Handsomely Decorated in Colors

Its general shape is that of a horseshoe, hinged at the base of the shoe. The back also has a design in colors. Open this case measures 9 inches long by 4¼ inches wide.

On one side there are four needle-pockets, containing sizes 3, 5, 6, 7 and 9 of the finest imported needles. On the other side is an assortment of fifteen fancy needles, including a square-end bodkin 2¾ inches long, two large darning-needles, each about two inches long, and twelve fancy large and small eyed needles. All of these needles are

Sharp's Best Ellipse Silver-Eyed

The eye is so shaped as to be threaded with the greatest ease; has no sharp edge to cut the thread. Another valuable feature is a groove-shape given to the end of each needle at the eye, so that the thread will follow the needle through any cloth, heavy or light, without the slightest strain. Order as No. 122.

This Needle-Case FREE

1 We will send this Needle-Case FREE, postpaid, for sending one yearly subscription, new or renewal, to the Farm and Fireside; or

2 We will send the Farm and Fireside one year, new or renewal, and this complete Needle-Case for 35 Cents

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Any one accepting this offer is entitled to a free count in the Dot Contest. See Page 19.

Address FARM AND FIRESIDE, Springfield, Ohio

Poultry-Raising

By P. H. JACOBS

PULLETS AS LAYERS

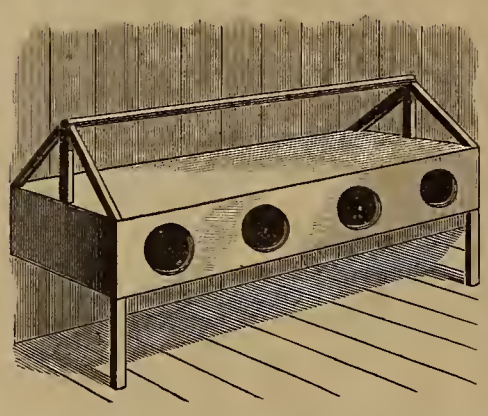
When pullets are forced to lay early, by stimulants or highly concentrated food, it is an injury, as it taxes their vitality. A pullet that is forced will lay very small eggs for a while, and when she ceases, in order to rest, she will not begin again as soon as an ordinary hen. She becomes prematurely old, and on the average does not prove as profitable as when she is given time to mature before beginning to lay.

TO CLEAN OUT A NEST

The only way to clean out a nest, should the contents become soiled, is to carry the box outside, burn the hay, then dip a sponge in kerosene, and apply a lighted match to the box, first rubbing it over with the sponge. The oil will burn over the box for a few minutes and then cease. If there are any lice they will have but a poor chance. If an egg is broken in the nest, the result is usually lice unless the nest is at once cleaned. The best mode is to begin anew, with the box very clean, and fresh-cut hay or straw put in.

NESTS FOR EGG-EATERS

The illustration is intended to show an excellent arrangement to prevent the eating of eggs by laying-hens. The nests are raised one foot from the floor, the space under the nests being utilized as a portion of the floor. The roost is placed over a platform on the nests. The hens cannot reach the eggs from the floor, and if the nests are only twelve inches high they cannot stand up in them to eat the eggs. The darker the interior of the nests, the better. This arrangement gives the fowls the whole of the space on the floor.



MOIST NESTS

Hens often "steal" their nests, and find some secluded location where the ground appears moist. This fact has prompted some farmers to believe that a moist location should be preferred for hens that are incubating. The selection of the nesting-place of the hen is not because the ground may be damp, but for the reason that she requires a cool location or to get rid of lice in the poultry-house. In winter the hens prefer a warm, dry nest. Experiments show that sitting-hens will hatch out as many chickens from the eggs when the nests are up on a dry hay-mow as when they are located on damp ground.

BROKEN EGGS

Hens soon learn vices, and consequently they should never receive broken egg-shells unless the shells are crushed very fine, or they will soon begin to eat eggs. When they make a practice of pulling the eggs out of the nests it indicates that they are willing to scratch, and are in need of some kind of material for that purpose. Never allow a hen to eat an egg that is broken if you can possibly prevent it. Remove it at once, and clean up any portion that remains.

THE COCKERELS

One of the expenses borne by those who keep large flocks of fowls is for the extra number of young cockerels. As a rule all male birds sent to market after the combs have developed are designated as "old roosters," although they may not be over six months old, and they seldom bring over six cents a pound in market. The time to sell cockerels is when they weigh about two pounds each. If retained they will not be more valuable, as the prices decline faster than the birds increase in weight. It is more economical to sell them as soon as they are old enough, and thus lessen the supply of food required, as well as also gain more room in the poultry-yard.

SELLING EGGS

Eggs sell every month in the year for cash, and are always in demand. Those who sell butter and eggs to the country stores receive the same prices for good butter or large eggs as are paid for the same articles not so good. The reason is that the country merchant sells in bulk, and sends all kinds together, very frequently compelling farmers to take pay in trade. The only way to get good prices is to study the markets, sell only choice articles, and know to whom to ship. The product of a few hens seems small by itself, but the profits are likely to suffer from the habit of overlooking the small things and utilizing only the larger. Strict attention to the little things constitutes a great element of success in every department of life.

Peafowls.—A. J. S. asks regarding the care and management of peafowls. They are in habits very similar to turkeys, though nearly twice as long in reaching maturity. The females should not be expected to lay before two years old, and they seldom hatch more than one brood a year. The same care as for turkeys will be sufficient.

Hens Eating Feathers.—S. J. B., Elyria, Ohio, finds a difficulty in his hens eating feathers by pulling them from each other. It is the result of confinement and lack of exercise, the first offender teaching the others. There is a "poultry-bit" sold to prevent feather-eating, but the better course is to detect the offender, and destroy or remove it, as such fowls are really worthless.

Indigestion.—D. C. S., Lewisville, Idaho, reports his hens as dying with "scours," or cholera. The cause is probably indigestion, due to overfeeding. The best remedy is to withhold all food for twenty-four hours, and then allow only one ounce of lean meat to each hen once a day for a few days, reducing the rations thereafter. No medicine is necessary. Examine for lice.

Small Eggs.—C. B., Freeman, Ind., mentions that some of his hens lay eggs that are as small as those of pigeons. He feeds corn, wheat and oats, his fowls probably being fat and out of condition. The remedy is to withhold grain and force the fowls to forage for their food. Sometimes, however, the small eggs may come from immature pullets.

Drooping Chicks.—E. S. F., Akron, Ohio, has lost nearly all of his young chicks from no apparent cause. They become droopy and die off one by one. It is probable that the large lice on the heads, necks and bodies are at fault. Anoint the hen and each chick on the head with a few drops of melted lard. The advertised lice-killers should be resorted to, as they are excellent.

Refused to Eat.—Mrs. J. B. M., Robinson, Kan., states that she had a White Wyandotte hen that refused to eat, white and green discharges occurring, and she lived a week. She had been fed upon oats occasionally. It would be difficult to give a cause of the ailment without more details of care and management, as the hen may have had access to some substance causing the complaint.

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The MOULDED RECORD and The NEW REPRODUCER
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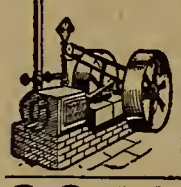

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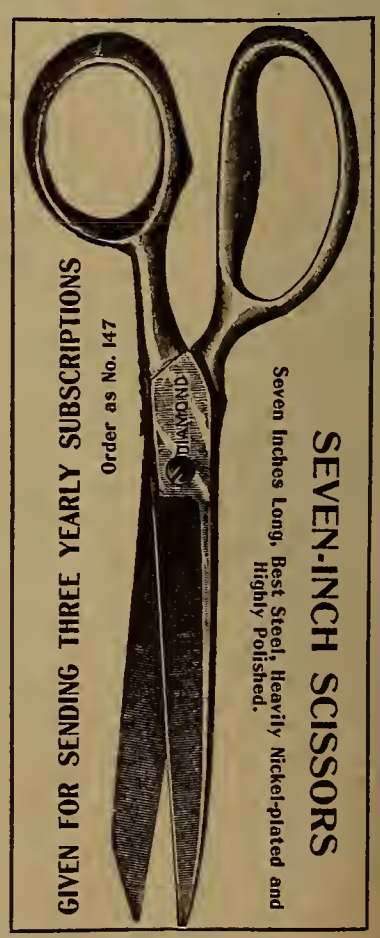

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70 Cents

(To Club-Raisers:—When the subscriber pays you this special price you are entitled either to the regular cash commission or to count the name in a club.)

Any one accepting this offer is entitled to a free count in the Dot Contest. See Page 19.

ADDRESS
FARM AND FIRESIDE, Springfield, Ohio

The Grange

By MRS. MARY E. LEE

JUNE

What is so rare as a day in June?
  Then, if ever, come perfect days;
Then heaven tries the earth if it be in tune,
  And over it softly her warm ear lays;
Whether we look, or whether we listen,
We hear life murmur, or see it glisten;
Every clod feels a stir of might,
  An instinct within it that reaches and towers,
And, groping blindly above it for light,
  Climbs to a soul in grass and flowers;
The flush of life may well be seen
  Thrilling back over hills and valleys;
The cowslip startles in meadows green,
  The buttercup catches the sun in its chalice,
And there's never a leaf nor a blade too mean
  To be some happy creature's palace;
The little bird sits at his door in the sun,
  Atilt like a blossom among the leaves,
And lets his illumined being o'errun
  With the deluge of summer it receives;
His mate feels the eggs beneath her wings,
And the heart in her dumb breast flutters and sings;
He sings to the wide world, and she to her nest—
In the nice ear of Nature, which song is the best?

—Lowell.

FARMERS ORGANIZING

NEWS of farmers organizing to secure some specific object is so common as to excite little comment. Here it is to secure equitable freight rates; there to realize the best market prices on wheat or dairy products. In a gratifying large number of cases they have met with success. Occasionally failure results from mismanagement or from one or more farmers breaking their contract. Unfortunately there are men who do not consider a promise made to a combination of farmers binding. They thwart for a time the efforts of those fighting for justice. In the end they are the worst sufferers, as those who remained true to their contract will in future operations ignore them. They then lose the profits arising from coöperation.

TEMPORARY ORGANIZATIONS.—These are but temporary organizations, entered into under stress of circumstances. Those that engineer them know that it takes an immense amount of faith, courage, sticktoitiveness and hard work to convince their fellow-farmers that results beneficial to all can be obtained. Very often the association dissolves after accomplishing the end in view. After a time necessity again forces them to combine, and the same amount of work must be done again. Isn't it a trying, expensive procedure? Wouldn't you accomplish more by maintaining your organization and using it when circumstances justify?

THE GRANGE A PERMANENT ORGANIZATION.—The grange has the advantage of being permanently officered and equipped. It is available when an emergency arises. At a critical moment valuable time does not need to be spent to create and foster public opinion. All the energy can be expended in accomplishing the object in hand. Moreover, the members have received valuable training in the art of conducting coöperative enterprises. They know all the loopholes, the strong and weak points. Instead of one man spending time in going from neighbor to neighbor he meets all at the grange-meeting. That which took days to accomplish is now done in hours. In these electric days, time, above all else, is money. Moreover, one will be surprised at the avenues that open up for self-help. A few grange-meetings demonstrate the value of coöperative efforts.

GRANGE PROGRAMS

A young farmer had just gone into a certain grange. The Lecturer, who was one of those stupid blunderers who are always prating of "duty" and "obligations," assigned to him a recitation. The young man's face was a picture of disgust. "The idea," said he later, "of my getting a recitation. I never spoke a piece in my life, and I don't intend to begin now." In vain his mother and sister pleaded. "I'll pay my fine," said he, doggedly, "but I'll not make a fool of myself in speaking. It would do me no good, and would only bore the listeners." Then followed a few uncomplimentary but true observations on the Lecturer.

The young man was right. I believe that herein lies the kernel of the whole matter of the failures to get good programs. For no other reason save that of custom work is exacted from members whose good sense tells them they cannot do it with justice to themselves or pleasure to others. Nor can they see any possible good to result from this martyrdom.

People who have nothing to say, and have the good sense to know it, and keep quiet, are condemned for failure to take part; while the chronic talker, who likewise has nothing to say, but insists on taking valuable time to demonstrate it, is scored for boring the grange. It takes more fortitude to listen to the average paper than to go on a long journey. And the recitations! Well, we would advise the frequent reading before the grange of Hamlet's adjuration to the players.

THE MODEL PROGRAM would consist only of work in which each performer did that which was most pleasing to him. The grange is not a school where a compulsory amount of work must be done, but a gathering of farmers for social and business purposes, and for the exchange of thought and experience. Personally I believe that far better results would be obtained by a well-defined course of reading being mapped out, and the tastes of each member, so far as possible, being recognized. This would not be so difficult as imagined, as the interests and enthusiasms of many are identical. Then, instead of a paper, which must of necessity be a rather indifferent rehash of others' views, let some phase of a subject be taken up, and the opinions of writers who are authorities on that particular matter be read by those assigned to duty.

The pith of the matter would provoke discussions, in which those interested would join. And it is this discussion and exchange of views that mark the successful meeting. Moreover, one would gain more real knowledge of worth from one hour thus spent than from dozens in papers of only moderate interest. Then the grange can go deeper into the matter, and continue the study from session to session, confident that at each meeting there will be read that which is of real value, and that the program will be sure to be rendered. Life is too short and too full of duties to be consumed in writing and listening to mediocre papers.

Try this plan, you Lecturer whose members do not respond to demands for papers and recitations, and report results. Of course, this must not be construed as a dissertation against all papers and recitations. Some there are who delight in writing or in speaking. Such would doubtless get up a good paper or recite creditably. But it is a plea for those conscientious people who desire to contribute their share of entertainment, yet feel that the tax is too great.

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These patterns retail in fashion bazaars and stores for twenty-five to forty cents each, but in order to increase the demand for our paper among strangers, and to make it more valuable than ever to our old friends, we offer them to the lady readers of our paper for the low price of only ***10 cents each.***

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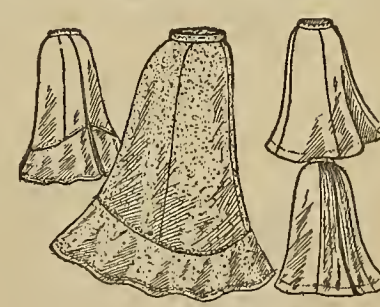

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SPECIAL NOTICE

To the Readers of the Farm and Fireside

Especially to those who are suffering with a neglected or deep-seated cough, Weak Lungs, Catarrh, Asthma, or any who are predisposed to Consumption, Dr. Marshal Beaty, the noted Throat and Lung specialist of Cincinnati, has kindly consented to give his recently discovered Home Treatment to all sufferers who apply at once.

The next three months are the best of the year to master and cure these ailments, and Dr. Beaty agrees to send, free of charge, three months' supply of medicines. The doctor guarantees that those who begin now and follow his advice will be cured, sound and well, before winter comes again. This little trouble and expense is only a trifle when compared to the great and wonderful results to follow.

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NOTE.—Dr. M. Beaty, the Throat and Lung Specialist, has an enviable reputation for ability in his profession, and will not promise what he cannot carry out. We advise our readers to write to him.—Christian Standard.

I WAS BLIND

Dr. Coffee Restored My Sight says J. M. Davis.

J. M. DAVIS, Winterset Ia.

Mr. Davis had been afflicted with weak eyes for many years. They would get better and then worse, and finally, a year ago, he was taken with a terrible inflammation of the eyes, ulcers formed and abscesses of each eyeball, which made him blind in 4 weeks; and having a neighbor who had been cured by Dr. Coffee, he went to him at once and in four months cured the ulcers, granulated lids and restored his sight.

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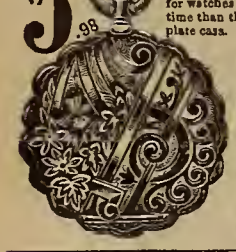

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$1,500.00 Cash Given Away

Can you count? Then you can enter the great Dot Contest described on Pages 18 and 19 of this issue of the Farm and Fireside. Cash prizes to the amount of $1,500.00 given absolutely free.

SOME BARGAINS From Our Immense Stock

Silk remnants, 100 pieces, 4c.; ladies' $2 shoes, 89c.; ladies' $3 jackets, 69c; men's $8 suits, $3.98; boys' $1.75 suits, 89c.; gold-plate ring, 1c.; blueing, 1c.; good calico, 3¾c.; bar soap, 1c.; best velvet, 29c.; ladies' walking-hats, 19c.; men's suspenders, 8c.; smoking-tobacco, 3½c.; good thread, 2c.; box tacks, 1c.; paper needles, 1c.; paper pins, 1c. Send for price-list. C. A. WILLARD CO., Chicago, Ill.

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If afflicted with weak eyes, use Thompson's Eye Water

Around the Fireside

THOUGHTS OF HOME

BY DAISY M. ELLIOTT

Sometimes in the young, young twilight
  Of a fragrant summer's eve
There come stealing gently o'er me
  Thoughts of home that will not leave;
And the half-heard din about me
  Falls in murmurs on my ear—
Murmurs of the rippling water
  And of voices once so dear.

Of the pine-tree by the brookside,
  Of the clover in the breeze,
Just beyond forgotten fence-rows,
  And the violets under these.

And again I see the homestead,
  And the faces full of cheer,
And the kettle calmly singing
  Is the murmur in my ear.

But anon the murmur ceases
  And the picture disappears,
And the heart-strings sudden snapping
  Fills my eyes with sudden tears.

In the rain of falling tear-drops,
  The clover in the breeze,
Violets in forgotten fence-rows,
  The sunshine and the trees,

Roses round the old homestead—
  Pictures of the past they stand,
Seeming, seeming like the pictures
  Of some far-off, sun-set land.

CURIOUS LAMPS

A FIREFLY-LAMP has the charm of novelty. It hails from the West Indies, and is quite a pretentious affair, being eighteen inches high, and built in three stories. It is made of wicker and bamboo cages, with little doors.

In these cages fireflies are imprisoned, and are cared for and fed. The lamp is one of a collection brought together at the National Museum in Washington by Walter Hough.

The collection includes lamps of all ages, from those of ancient nations to lamps of to-day. There are old English lanthorns there that would delight the collector of curios.

Among the Chinese lamps are those made of bamboo, and used to light alleyways. They are the illuminators that so often lead to conflagrations. Eskimo lamps, old-fashioned olive-oil lamps, and Japanese lanterns suspended from sticks, add to the interest of the collection.—Epworth Herald.

A FABLE FOR THE RICH

Suppose that a fine specimen of an old deerhound, very successful in his business, should collect untold deer in his park, fatten them up, and then say to his puppies, "Here, boys, I've had a hard life catching these deer, and I mean to see you enjoy yourselves. I'm so used to racing through the woods and hunting that I cannot get out of the habit, but you boys just pile into the park and help yourselves." Such a deerhound as that would be scorned by every human father. The human father would say to such a dog, "Mr. Hound, you are simply ruining these puppies. Too much meat and no exercise will give them mange and seventeen other troubles, and if distemper doesn't kill them they will be a knock-kneed, watery-eyed lot of disgraces to you. For Heaven's sake keep them on dog-biscuit and work them hard."—From Andrew Carnegie's "The Empire of Business."

GREAT SALT LAKE SINKING

The decline in the surface of Great Salt Lake is causing apprehension among the people of Utah. This interesting body of water has been steadily sinking for a number of years, but the causes of its decline are not well understood. It is thought by some that the lake is subject to cycles of change which correspond to like cycles of years of heavy and light rainfall, and that it is now undergoing one of its low-water periods, from which it will soon revive. The movements in the water have also been thought to be related to the development of agricultural and grazing interests, which divert large quantities of water from the streams which feed the lake for use upon the land. During past years the cutting of the timber on the neighboring mountains has been unusually heavy, practically destroying the forest protection of the head-waters of a number of streams whose waters flow into the lake. The cutting of these forests is supposed to have injured the flow of the streams, and thus to have affected the lake-level. Great Salt Lake is the means of considerable resource to Utah, and the value of property near the lake and certain lines of business are said to be unfavorably affected by its decline. The matter is there considered of so much importance that the United States Geological Survey has been asked to make an investigation into it.

THE MEAT SUPPLY

When the price of meat soars to such an altitude that it is practically beyond the reach of the masses, unless they dispense entirely with thrift and go in for reckless extravagance, is there no remedy? Whether the phenomenal soaring be the result of natural or artificial causes, or a combination of the two, is there not a way by which the prices can be reduced and held permanently at a lower level? The easiest, simplest and surest way to cheapen the market price of any commodity is to diminish the consumption of it. Cannot this method be adopted with meat? Can it not be adopted without injury to health or any deterioration of physique?

There are many authorities who answer that question with a hearty, resonant "yes." We do not refer especially to the vegetarians, although their testimony, resulting from experience, is well worthy of consideration. Outside of their ranks, among physicians and laymen in every occupation and of no occupation, there is a widely prevalent belief that Americans eat too much meat—too much for both physical and mental welfare—and that therefore a material reduction of their consumption of carnivorous food would produce a higher average of bodily health and intellectual achievement. Cut down the daily consumption of meat by one fourth, and hold it there, and the prices would come down, and stay down.

Half the people on this globe subsist almost exclusively on rice and fish. Half of the other half eat meat not more than twice a week. The cereals, vegetables and fruits furnish an endless variety of food. As to fish, it would be easily practicable to indefinitely increase the supply. Wherever there is pure water fish can be propagated. There are hundreds of thousands of farms in the United States on which fish could be propagated at small cost. The possibilities of fish production, notwithstanding the wise and well-directed labors of national and state commissions, have scarcely been entered upon.

WHAT AN AMERICAN SAW IN HINDUSTAN

We landed at Bombay on New-Year's eve. We knew the date by the calendar, not by the aspect of things. It seemed to us much more like a midsummer, than a midwinter, day. Nature presented a gala appearance. She was dressed in holiday attire, but not such as she is accustomed to don at that season in America. The prevailing color of her garments was green, not white. The material was more durable, too, than the flimsy, pearly substance she was wearing that very day in some of the other countries.

We found Bombay to be a city of cities. Within its confines four distinct cities have their place—the English, the Parsee, the Mohammedan and the Hindu.

In the English city are the grand public buildings, and the beautiful private dwellings of the civil and military officers. "Her Majesty's" (it was "Her Majesty" then) officials receive excellent salaries, and live in a style befitting their means. Their compounds are villages in miniature.

Because of the caste system which prevails so universally in India many servants are required to do the work of one family. This fact accounted for the presence of the row of mud huts which we so often saw at the rear of the compounds. The various servants, with their families, lived in them. It requires as many different servants as there are different kinds of work to be done. One will sweep, another will bring the water, a third will cook, a fourth will run errands, a fifth will sew, and so on.

The Parsees have by far the best "native city" in Bombay. Many of the men are wealthy merchants or landowners. The women are strikingly beautiful, and, what is remarkable for the wealthy in India, no chudder, or "purdah," veils hide their handsome features and sparkling eyes from the gaze of man. Their homes on Malabar Hill appear very magnificent; but one is greatly disappointed upon entering them, however, as they are only meagerly furnished. There is nothing elegant or comfortable within.

The Parsees are fire-worshipers. Their traditions teach that the sacred fire, which Zoroaster brought from heaven, has been kept continually burning. The Bombay priests testify that their ancestors brought their fire from Persia, and that it has never been allowed to go out, but has been burning brightly in their sacred temples ever since. We, being "unbelievers," were not permitted to enter these holy edifices, but we could stand in the doorway and see the altars and fires.

The Parsees form about twenty-five per cent of the entire population of India. Their general appearance is prepossessing. They will not eat food cooked by a person of another religion, and they do not eat beef or pork. Marriages can only be entered into with persons of their own caste and creed. Every evening one meets elegant turnouts filled with gaily dressed children and richly adorned women on their way from Malabar Hill to the sea-coast, where they go to worship the setting sun.

The Mohammedans consider themselves far superior to the idol-worshiping Hindu. Although their "city" does not contain so many elegant residences as the Parsee community, still it is very much better than the Hindu quarters. The Mohammedan women are kept in the strictest "purdah." Their seclusion is something awful to contemplate. The Mohammedans are excellent cooks. All the English prefer them to any others in the city.

Many of the men are educated, and hold lucrative positions under the government. Some of the wealthy "babus" have many more than the four wives allowed them by their religion.

The high-caste Hindus have rather better houses than the low caste, though all are poor enough. Among the low-caste Hindus are to be found squares of squalid huts, where swarming natives live in abject poverty. During the rainy season we have seen many of the mud huts swept away by the heavy floods. Thousands of these natives go from the cradle to the grave without ever having their hunger satisfied. Their caste lines are largely responsible for this state of things. All the children must follow directly in the steps of their parents. They can neither "go west" to take up homes of their own, nor engage in new and more profitable lines of employment.

BOMBAY.

The Housewife

MAKING AND BAKING CAKE

No. 1

THE first step in the process of successful cake-making is to carefully read the receipt. Then, having ascertained what materials are to enter into the composition of the cake, and the exact amount of each, place them, together with all necessary utensils, conveniently at hand.

When this has been done the baking-pans should be made ready to receive the batter, so that the moment it is sufficiently beaten it may be speedily transferred from the earthen mixing-crock to the oven. This item should not be overlooked, for it is of the utmost importance that the batter be exposed to the heat of the oven as soon as it becomes filled with air-cells—that is, when it is light—especially if baking-powder has been used, for it effervesces but once, and it should be baking while this process is going on.

For greasing the pans never use butter; one of the various vegetable-oils sold for cooking purposes is to be preferred, but fresh, sweet lard will answer. Apply the grease with a brush or with a clean cloth wrapped around a short stick.

When loaf-cakes are to be baked the pans should be thoroughly greased, lined with white paper, then greased again. This keeps the cake from sticking. In the case of very large cakes, which must bake two or three hours, it is advisable to not only paper the inside, but also the outside and bottom, with four or five thicknesses of wrapping-paper which can be tied on. All loaf-cakes should be covered with a cap of brown paper when first put in the oven, to prevent the cake browning before it has baked. Such cakes should be baked in pans having stems in the center, else the edges will burn before the cakes have baked in the middle.

Pans for baking layer-cakes should be well greased, then thoroughly dredged with flour.

Having accomplished the foregoing, the heat of the oven should be regulated before proceeding to the cake-making proper.

More cakes, perhaps, are ruined in the baking than in the making, as few cooks appreciate the fact that the heat of the oven must be tempered according to the variety of baking to be done.

Loaf-cakes require a steady heat. If the oven is too hot they will bake before they have sufficiently risen. On the other hand, if there is not heat enough the baking process will be retarded, thereby causing the cake to "fall" and become heavy.

There is such a difference in the amount of heat given out by the various fuels, and there is so great a difference in the construction of ovens, that no precise rule can be given for heating them. This must be regulated by experience and observation. To test the heat throw a little flour on the floor of the oven. If it scorches black immediately the oven is too hot; if after a few seconds it still is white the oven is too cold, but if at the end of sixty seconds it is nicely brown the oven is about right.

KATHARINE E. MEGEE.

BATTENBERG CENTER

As this work continues to be so popular, we present our readers with another beautifully conceived pattern for this work. It can easily be drawn to fit any square by making the points fit the side of the square.

MARMALADES

PEACH MARMALADE.—Take a rough towel—a clean one—and rub all the fuzz from sound, ripe peaches. Cut them in halves, and take out the stones. Crack somewhat more than half of these stones, and take out the kernels. Rub the skins off these kernels—you can easily do this by first pouring boiling water over them—then pulverize the kernels. Put the peaches in your preserving-kettle, pouring over them three fourths of a pound of sugar to one pound of peaches. Let them heat slowly; when it begins to boil it will have to be stirred constantly for half an hour. When the time is almost up put in the pulverized kernels. When it has again boiled up for a few moments put the marmalade in jars, and before it is cold dip a white paper in brandy, lay on top of the marmalade, place cotton batting on this, and seal tightly. The brandy or alcohol must be heated slowly on the back of the stove before the paper is dipped in. The layer of cotton batting on top of the paper and on the inside of the jar prevents the germs from penetrating into the fruit. The germs, you know, are what cause the mold—in fact, they are the mold. Any kind of canned fruits or pickles will keep better if this brandy or alcohol paper is used, also if the batting is put immediately above it. Some people even put more of the batting over the covers, allowing it to extend all around an inch below the rubbers. They put it on as soon as the cover is screwed on, while the jar is still hot, tying it on tightly.

ORANGE MARMALADE.—Take a dozen Florida oranges, grate off the yellow rind, and add to this the juice of five large lemons. Then take off the thick, white rind of these dozen oranges, and all the rind from eight more. Weigh these twenty oranges, and allow "pound for pound" of sugar. Put the lemon-juice, grated orange-rind and sugar over the fire, and let it boil. While it is coming to a boil loosen the pulp from the tough, white skin, and then add to the syrup; continue the boiling very slowly until it will "rope," then seal as desired. If two or three marbles are put in when the sugar is boiling the heat will keep them moving, and this will keep the syrup from burning.

ELLA BARTLETT SIMMONS.

DAINTY HANDKERCHIEFS

As fine needlework continues to be the favorite fancy work of the girls of the present day many of them are very much interested in making their own handkerchiefs. The line we illustrate were all made by one girl for a wedding-trousseau. The first one is a hemstitched center, the border being a crocheted Irish-point lace. The next of fine tatting and footing ruffles. The third of point-lace braid, the fourth of tatting, each wheel being made separately. The fifth of drawn-work and tatting, the sixth a simpler pattern with the lace braids. The centers vary from seven to nine inches, and the linen from one dollar and twenty-five cents to two dollars or more a yard. The material being wide makes the cost only from twelve to fifteen cents for a center.

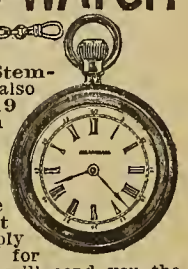
CARE OF HONEY

The average housekeeper will put honey in the cellar for safe-keeping. It is not a suitable place by any means, as honey requires a warm place. It readily attracts moisture, and that makes it become thin and watery. With the comb it is still worse. The beautiful white surface becomes watery, and darkened drops of water ooze through the cappings and weep over the surface. It will not hurt it to be kept in a temperature of even one hundred degrees. Where salt will keep is a good place for honey. The kitchen cupboard or the hot attic through the summer's heat will render it proof against the winter's freezing cold.

Oil-cloth is an ideal covering for the kitchen ceiling and walls. The effect will be decorative if it is held in place with beveled half-inch pine or oak, and the cost, although quite an item, you will cheerfully pay when you realize that it is "for one and all." The ceiling is quickly and easily cleaned with hot, clear soap-suds, being reached with a long-handled mop. For the lower walls I use an old soft woolen shirt. Always select a light, cheerful tint, as then you can always detect the soil, and always have it clean.

MRS. J. C. CUMMINGS.

STEM-WIND WATCH



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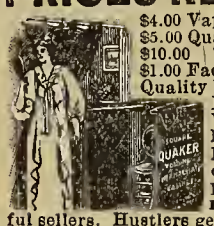

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In Old Virginia

By JESSIE EWING STOKES

HISTORIANS agree that the two lines of development along which the English forms of government seem to have moved in the United States are those of New England on the one hand, and Virginia on the other. Between these two settlements is a marked contrast, caused not only by such physical conditions as soil and climate, but also by the difference in religious and political customs between the Puritans of New England and the Cavaliers of Virginia.

In New England the people, having crossed the seas in congregations, led by their own ministers, settled in groups, or townships. The block-house occupied an elevated position, in order that it might command a good view of the surrounding country. Here the people assembled in case of attack by Indians. On the same common stood the "meeting-house" and the school-house, and grouped around these were the homes of the settlers. Here was no extensive cultivation of the ground, but fishing and commerce were carried on, and later manufacturing.

In Virginia the immigrants came as individuals, the possibilities of extensive tobacco-raising being a lodestone as great as that of gold in California. For this reason the people settled far apart, that they might cultivate large plantations. They journeyed by carriage or on horseback to their common church—the Episcopal. "This was the old family church where their forefathers had worshiped, and under the shadow of which they had been buried. They all belonged here, no matter what other church might claim them as members. They paid the old clergyman's salary; served in the vestry; attended the services; kept church, organ and churchyard in repair, and in all respects regarded themselves, and were so held by the others, as members here of right and by inheritance. It was church and family instead of church and state, and the sternest Baptist or Presbyterian among them would have thought himself wronged if left out of the count of this little church membership. This was their heritage, their home, and the fact that they had also united themselves with churches of other denominations made no difference whatever in their feeling toward the old mother-church there in the woods, guarding and cherishing the dust of their dead."

In New England the township was the unit of government. All the men assembled in the "meeting-house" in the spring, talked over all business together, voted upon the amount of taxes they should pay, and elected their township officers.

In Virginia the "county" was the unit of government. Although every Virginia gentleman was expected to be well informed on politics, the laws were made by representatives. Distance between plantations and distinctions between classes demanded this. In place of the New England town-meeting Virginia had her court-days, when people from far and near gathered on the court-house green. "Old debts were settled and new ones made; there were auctions, transfers of property, and if near election-time, stump-speaking."

In New England slave-labor was not profitable, because the farms were small; in Virginia large plantations made slave-labor necessary, thus giving rise to distinct and separate classes of society—in other words, society in New England took a democratic form, while in Virginia it assumed the aristocratic form.

In New England free schools were established. In Virginia they were established, also, but by individuals instead of by the people.

In the days of Old Virginia society was divided into four classes. The negro slaves, many of whom were imported direct from Africa, formed the lowest class, or step.

The second class consisted of the freedmen and of the indentured white servants, who were usually convicts or ex-convicts sent to this country for a stated term of service. These "poor whites" had small pieces of ground, but were shiftless, were considered as pariahs, and made no progress. Even the negro who belonged to a good family had a station; the "poor white" had none.

The third class included the small planters, the hunters, the fishers and the hardy and fearless mountaineers of whom Lincoln was a descendant.

The fourth class, and the highest in the scale, consisted of the great planters. Tidewater Virginia was a kind of "sylvan Venice." Up the rivers of this section the salt tide ebbed and flowed, and each plantation had its separate wharf, or warehouse, from which the products of the estate could have ready shipment direct to England. In some cases the planters did not need to go outside their own plantations for any kind of work, all trades being represented by their slaves; more often, however, the planters considered paid workmen more profitable.

"It was a very beautiful and enjoyable life that the Virginians led in that ancient time, for it certainly seems ages ago, before the war came to turn old ideas upside down and convert the picturesque commonwealth into a commonplace modern state. It was a soft, dreamy, deliciously quiet life, a life of repose, an old life, with all its sharp corners and rough surfaces long ago worn round and smooth. Everything fitted everything else, and every point in it was so well settled as to leave no work of improvement for anybody to do. The Virginians were satisfied with things as they were, and if there were reformers born among them they went elsewhere to work changes. Society in the Old Dominion was like a well-rolled and closely packed gravel walk, in which each pebble has found precisely the place it fits best. There was no giving way under one's feet, no uncomfortable grinding of loose materials as one walked about over the firm and long-used ways of the Virginian social life. They loved the old because it was old, and disliked the new, if for no better reason than that it was new—for newness and rawness were well-nigh the same in their eyes."

Let us look, then, upon some of the time-worn customs that governed these little colonies. Let us visit a plantation in Old Virginia before the war. Let us suppose our host to be a man of generous acres and of the generous Virginian hospitality. His hundreds of acres lie about us—some planted in tobacco, some lying in woodland, or forest. Here is the little village of slave cabins built of logs or undressed planks. According to an inventory made by a curious visitor one of these cabins was found to contain a bed, a few chairs, two or three pots and kettles, a pair of pot-racks, a pot-hook, a frying-pan and a beer-barrel. Their menu consisted of "hog and hominy," with potatoes and green vegetables. Here beat many a noble heart, faithful to the interests of his master; here dwelt the treacherous and deceitful; here also were some whose minds could grasp only the present moment. But all were happy. As a recompense for their daily labor all care of maintenance of self and family was lifted from their shoulders. So, when the sun went down, they gathered before their cabins, played the old banjo, sang and danced, and watched with parental pride the progress of the piccaninnies as they learned the steps.

ON THE OLD VIRGINIA FENCE AROUND THE PLANTATION CABINS

Some of the throng were field-laborers under an overseer, who was usually kind, sometimes brutal. These laborers were well fed and rarely overtasked. They had their own garden-patches and occasionally sold eggs and poultry to the master.

Others were house-servants; and their solemn dignity, perfect knowledge of their places and great affection for the family will ever be a pleasant memory. The gray-haired coachman, the grand and dignified old butler, who stood behind your chair watching to see how he might serve you, and the kind old Mammy, who petted and cared for the master's little ones as though they were her own, are gone with the days of Old Virginia; but Virginia's children will remember them with affection and with regret as true and loyal friends.

As we leave the negro-quarters we see the tobacco-barns, corn-granaries, the stable, cattle-pen, hen-coop, dove-cote, dairy and the country store. Here are brick ovens for curing hams and bacon, vegetable-gardens, flower-beds, and finally, in the midst of noble trees, we reach the Great House, or mansion. Looking a little farther, the blue river stretches along, with the wharf, or "landing," in plain view. In another direction is a fine orchard, and a pasture in which finely bred horses daintily munch the grass.

The first feature in the Great House to attract and hold our attention is the open fireplace, with its huge logs blazing forth comfort, content and welcome. There is nothing like an open fire. The planter, while lavishly hospitable, is but plainly dressed, except when he goes to church or to the court. On these occasions of state he rumbles along in his coach in the full and splendid dress of the time amid the open-mouthed admiration of his faithful slaves.

Our planter does no hard work, and yet he is a busy man. He has his stables to oversee, visits to receive and to make, guests to entertain, court and planters' meetings to attend. Then there are hunting, fishing, fine horses, and many things requiring his attention. By law of primogeniture he, as the eldest son, retains the family mansion. Upon him has devolved not only the keeping up of the honor of the family, but it is his also to shoulder the family debts, and to see that his younger brothers and sisters are properly educated and brought up.

But full of responsibility as he may be, the Virginia housewife is the really "busy" one of the household. She is the first to rise. With her key-basket upon her arm she makes her daily rounds. First she kneads the light bread and prepares the rolls, which she sends to the kitchen to be baked and served. She gives out the other materials for breakfast; directs the house-servants in their sweeping, dusting and polishing; writes several notes to lady friends; talks with guests who rise early, and although by time-worn custom breakfast is served at nine by the clock, it is also a custom for her to send a messenger to the kitchen every ten minutes, telling the cooks to "hurry up breakfast."

This meal over—and an enjoyable and substantial one it was—the mistress washes and scalds the dishes and glassware with her own hands. Then from the garden, smoke-house and store-room she gives out the materials for dinner, after which she either rides, reads, plays back-gammon or delights you with her music. At one she retires to her room for a time. At four dinner is ready. Lo! from the spacious kitchen issues forth a dusky procession laden with steaming dishes. Even the little piccaninnies have something to carry.

Supper is served at eight, and at ten or eleven the ladies retire. But besides this daily routine this busy housewife has yet other duties. She cuts and makes clothing for all the negroes, instructs the negro girls in cutting and sewing, attends upon the sick negroes each day, embroiders, visits, entertains, and on Sunday conducts a Sunday-school in the negro-quarters.

Sunday was a great gathering-day. It was then that invitations were freely given and freely accepted. House-parties were made up, which made much gaiety for the young folks. The Virginians knew how to enjoy life. The old, roomy, rambling houses were beautifully kept by the many servants. Not having much to do in actual work, the young men spent much of their time in hunting, riding, and in the various outdoor sports, thus laying a sure foundation for health and strength. They were also usually great readers, and good Latin scholars.

Thomas Jefferson, the apostle of democracy, the man of personal magnetism and keen thought, is said to have been a typical Virginian—a deadshot with the rifle, a skilful horseman and a clever violinist.

Patrick Henry, the marvelous orator; Marshall, the second maker of the Constitution because of his interpretation of its meaning, and Washington, the planter, the leader, the aristocratic gentleman, are types of Old Virginia. "On the whole it was a noble type of rural gentry that the Old Dominion had to show. Manly simplicity, love of home and family, breezy activity, disinterested public spirit, thorough wholesomeness and integrity—such were the features of the society whose consummate flower was George Washington."

GALILEE IS A GARDEN

Galilee is the garden of Palestine, and has the most prosperous-looking farms and the most contented and comfortable people. Even the name has a musical and merry sound. Everything grows here, from the wheat of the Caspian Sea to the Egyptian palm. When the hills of Judea are rocky and bare, when the meadows of Samaria are burnt down, and the valleys of Sharon are parched with drought, the lowlands of Galilee are bright with flowers and growing crops. Every hill in Galilee, every bit of bottom-land, is a wheat-field; the mud walls are covered with myrtle, and the air is scented with the perfume of the orange-flower and the syringa. Galilee measures fifty miles north and south and between thirty and thirty-five miles east and west. It consists of three series of plateaus, or zones, rising one above another toward Lebanon, and culminating in the snowy peak of Hermon. David sang in the Psalms of "the dew of Hermon, that cometh down from the mountains of Zion."

The roads of Galilee wind among lovely glades, through groves of oak, and are illuminated by an abundance of flowers. There is a profusion of underbrush, and immense cactus hedges divide the fat wheat-fields. The arable land is all under cultivation and filled with prosperous villages.

Judged by their own standard the Galileans are probably more prosperous and have more to be thankful for than any other subjects of the grand Turk, but it would be impossible to persuade an American family to live a week under the conditions in which these happy people have spent their lives. The mud huts of Ireland are palaces compared with the hovels of the Galilean villages. They have no windows or chimneys. The opening cut for a door furnishes all the light for the interior, and the smoke goes out of a hole in the roof. There is not a hundred feet of lumber in the entire place, except the door, which more often than otherwise is made of slats. The furniture is very scanty, and most of the families sit on the earth floor. The bed is a mass of sheepskins with the wool on, and it is filled with all sorts of insect life. The cooking is usually done in a camp-kettle outdoors, and nearly all the food is stewed. In most households a single dish—a big earthen bowl—is considered sufficient table-furniture, and around it the parents, children and any visiting friends gather and help themselves with their fingers. And yet they are happy, and boast that their country is "full of the blessings of Jehovah."—William E. Curtis, in the Record-Herald.

The Family Lawyer

By JUDGE WM. M. ROCKEL

Legal inquiries of general interest from our regular subscribers will be answered in this department free of charge. Querists desiring an immediate answer by mail should remit one dollar, addressed "Law Department," this office.

LINE-FENCES.—G. P. P., Ohio, inquires: "What is the law as to line-fences in this state? Can I compel my neighbor to keep up half the line-fence between us?" The law in Ohio as to line-fences requires an adjoining landowner to maintain a partition fence when the lands adjoining are inclosed. You can compel your neighbor to maintain one half of the line-fence provided he incloses his own lands, but if your neighbor's lands are thrown out in the commons then you cannot compel him to maintain any part of it.

WITNESSES TO WILLS.—A constant reader asks: "If a person in perfectly sound health and of sane mind has his will drawn up by a lawyer, and affixes his signature thereto, is it necessary that the signatures of witnesses be attached also? If so, must these witnesses have first read said will or had it read to them before signing their names?" A will is not good unless the signature of the testator is attested by two witnesses. These witnesses must either see the testator write his name to the will, or the testator must tell them that the paper which he wishes them to sign is his will. The witnesses need not know the contents of the will.

WIDOW'S PROPERTY-RIGHTS.—Reader, Ohio, wishes to know: "If A. dies, leaving a widow, but no children and no will, can the widow hold the property, real and personal, and will it as A. could have done had his wife died first?" The laws of Ohio make a distinction as to real and personal property. Where a husband dies, leaving a widow, but no children, the widow acquires all of the personal property. If the husband owns real estate, which he purchased, no matter whether he purchased the real estate with money that he earned or money that was inherited, it would go to the widow. If the real estate was inherited by the husband, then the widow would have only a life estate, and the widow could make no disposition of it. If the property is personal, or real estate acquired by purchase, then it becomes the widow's, and she may will it to whomsoever she chooses.

HEIRS TO PROPERTY.—Inquirer wants to know: "If a poor woman marries a wealthy man in the state of California, and lives there, how much of his property is she entitled to legally where there are no children? Also where there are children?" By the law of California, when a person dies without a will his property, both real and personal, descends to his heirs. The same rule applies to man and woman. If the person dying leaves a surviving husband or wife and only one child, or the lawful issue of one child, then the property is equally divided between the surviving husband or wife and such child, or the issue of such child. If there is more than one child then the surviving husband or wife gets one third, and the remainder goes to the children. If there are no children the estate goes one half to the surviving husband or wife and the other one half to the father and mother in equal shares, or, if one be dead, to the surviving father or mother. If there be no father or mother then their one half goes in equal shares to the brothers and sisters. If there is neither a child, father, mother, brother or sister, the whole estate goes to the surviving husband or wife.

The Family Physician

By ROBERT B. HOUSE, M.D.

PRACTICAL HINTS

Alkaline waters must not be given too long, for fear of phosphatic calculus.

A mineral water containing sulphates without chlorides will interfere with digestion if used continuously.

When a fish-bone sticks in the throat, and cannot be gotten up, a raw egg taken immediately will usually carry down the offending bone.

Wood-alcohol is said to have the peculiar property of causing blindness, and should be used with great caution.

EFFICIENT METHOD OF RESTORING LIFE

Dr. J. V. Laborde, a Parisian physician, has perfected a method of restoring life in case of drowning and suffocation which appears to be more successful than any method hitherto practised. Persons who had been apparently dead for three hours or more have in this way been brought back to life. It is called "rhythmical tongue-traction," and consists in the periodical pulling of the tongue from twenty to twenty-five times a minute. This can be done with the hand, a handkerchief being wrapped about the tongue, but it is more easily and regularly performed by means of a simple machine driven by clockwork. The method has come into use in many hospitals in this country, as well as in Europe, and the results are regarded as very valuable. The effectiveness of tongue-traction is based upon the fact that it directly excites the pneumogastric nerve, which is the nerve governing the action of the heart and lungs. In case of drowning tongue-traction is more effective than the old method of working the arms up and down to restore breathing.—The Sanitarian.

HOT WATER IN THE DISEASES OF INFANTS

In cases where there is non-assimilation of food, accompanied by vomiting, purging, and even convulsions, Dr. H. S. McConnel (Health) orders all the hot water the child will take, given through a nursing-bottle. In one most severe case when no kind of nourishment could be retained, and medicines did no good, the hot-water treatment was tried. The first bottle of water was immediately vomited, but the second was retained, and a most peaceful sleep followed. The condition of the bowels greatly improved, and vomiting gave very little trouble. At the end of another twenty-four hours a teaspoonful each of cream, lime-water and water was given every hour, then egg-water, and finally condensed milk.

This was an extreme case, every one expecting the child to die, yet it made a good recovery. Hot water is a stimulant, an antiseptic, a sedative and a food, and if you will flush the stomach of the vomiting and purging infant with hot water for twenty-four hours, withholding all foods, and then in small and easily digestible quantities, at short intervals, give nourishment, you will very often rescue it from the grave. Commence with pure hot water, then add salt, and when necessary, sugar. One will be surprised to see how greedily the children drink it, preferring it to their nurse, and it will produce a quiet, peaceful sleep, and the extremities that were previously cold and clammy will become warm and natural.—Medical Times.

Sunday Reading

LIFE'S LOOM

Weaving, weaving, weaving,
Time is the warp,
Pulsing and throbbing, Life's loom goes;
Spinning, spinning, spinning,
Man's deeds the woof,
Quickly and busily the shuttle he throws.

The little child takes up the task
As soon as consciousness begins,
His tiny hands uncertain act
As merrily he heedless spins.

The youth, with pride and confidence,
Loud vaunts the deeds he will achieve.
The future, big with great events,
In blazing light his name will weave.

Hard pressed, beset, the man toils on,
Speed by the days, the months, the years,
Aghast and desperate he stands,
So small his greatest work appears.

With palsied hand, old age has come,
Slow goes the loom—Fate cuts the thread;
Wide yawns the grave, the web is spun,
A shroud is woven for the dead.

'Tis thus through life; man spins and weaves,
Until of time and deeds complete
This mystic robe, his very self,
Becomes for him his winding-sheet.

Weaving, weaving, weaving,
Time is the warp,
Pulsing and throbbing, Life's loom goes;
Spinning, spinning, spinning,
Man's deeds the woof,
Ever and ever the shuttle he throws.
—Harper's Weekly.

A POSER FOR MAMA

FOUR-YEAR-OLD Tommy was rolling his hoop on Sunday.

"You mustn't roll your hoop in the front yard on Sunday," said his mother. "You must go into the back garden."

"Isn't it Sunday in the back garden, mama?" asked Tommy.—The Little Chronicle.

PERSPECTIVE

You can get a dollar so near the eye that it will blot out the sun. The defect of Chinese art to Western eyes is its lack of perspective, so that the figures of men a mile away are as large as those in the foreground. The eye gets no real sense of distance. The fisherman who has really caught a big fish has it photographed by his side. If he has a little fish, and wants it to look big, he suspends it near the camera, and then he steps back as far as it seems good to him. To detect the fraud use a stereoscope. Its two lenses will restore the sense of perspective, the sense of "looking through" the air, and you will see a big man standing well back of a little fish.

The reason some people are not religious enough to do them any good is because they insist that the dollar is as big as the sun; that the Chinese picture shows things as they are; that the fish weighs fifty pounds instead of five.

If eternity began where time leaves off we would insist that life's pictures should make earth big because in the foreground, and heaven small because in the blue distance. But eternity does not begin. It is! The parables of the kingdom are in the present tense. The life that is eternal is not a thing to be longed for hereafter, but to be laid hold upon now. It is the real life, the life that is life indeed. Paul's injunction to Timothy took account of the present world at its full value when he said, "Charge them that are rich in this world . . . that they lay hold on eternal life."—The Epworth Herald.

A LESSON FOR CHRISTIAN MULTIMILLIONAIRES

Christian men to whom God has intrusted vast wealth should give heed to the editorial, "A Lesson for Christian Multimillionaires." Why should two men who make no pretensions to evangelical Christianity be allowed to amaze the world by the magnitude of their gifts to secular enterprises, while men who have perhaps as many millions, and who profess to have been saved by the death of Christ, give next to nothing, or nothing at all, for carrying out the magnificent waiting enterprises involved in Christ's last command for the world's evangelization? The editorial closes with these thoughts:

"Why is this dereliction in the duty of Christian stewardship? Are the rich ignorant of God's claims? Has the pulpit failed to make the obligations of stewardship clear to them? Has it failed to set before them in burning words the splendid opportunities offered them? Why are they falling so far behind 'the children of this world?' Why does not some Christian rich man arise to undertake the giving of the Gospel to Porto Rico, or to the Philippines, or to Cuba, or to some ward in New York City, or to some other of the ten thousand fields open to Gospel effort, and to undertake it on a scale commensurate with the administrative ability that has given him his millions? The preachers and the rich men will alike have to reckon with these questions some day. Ought not the splendid examples of the Steel King and the Diamond King to stir to thought and action now?"—The Homiletic Review.

"GO ON, SIR; GO ON!"

Arago, the great French astronomer, tells us that he became so discouraged in the study of mathematics that he almost resolved to abandon his effort. He was just about ready to give up when he happened to notice something printed or written under the paper binding of his book. He unfolded the leaf, and found it was from D'Alembert. The letter said: "Go on, sir; go on! The difficulties you meet will resolve themselves as you advance. Persevere, and the light will dawn and shine with increasing clearness upon your path." This striking passage made an impression upon the young mathematician's mind which he never forgot. It was a perpetual spur to his ambition, and came to him just in the nick of time. He resolved then and there that he would surmount every difficulty; that he would become a great mathematician himself. He tightened his grip, and urged himself on until Fame took him up and told the world the story of one of the greatest astronomers of his time.

Hanging on was one of Grant's strong points. He did not know how to let go. He would keep pegging away, no matter what the obstacles, until he triumphed.

The race is to the plodder. I have in mind several very brilliant graduates of last year, and years before, who promised a great deal, and of whom friends predicted great things, but somehow they have disappointed all expectations simply because they lack sticking qualities. They are good scholars, and they imagined because they ranked high in college that they would rank high in life without great effort.

But they lack the hanging-on quality. They do not realize that in practical life the race is to the plodder, and not necessarily to the swift. This is why so many brilliant class-leaders have become disappointments to their friends. The chain is no stronger that its weakest link, and lack of perseverance is a fatal deficiency which nothing else will supply.

Perhaps the greatest secret of success in life is due to those sticking qualities. Grip conquers the world—the faculty of sticking and hanging on when everybody else lets go.—Siftings.

The First Dance

By FRANK H. SWEET

Miss Parrish pressed the tip of a pink finger more firmly into the soft contour of her exquisitely formed chin, as though the contact might put an end to her indecision. Five minutes she had stood there, gazing down into the rotunda of the great hotel, and still she was as far from knowing what she would do as when, pausing on her way down, she had seen them—the one faultlessly dressed, suave, expectant, the other leaning carelessly against a pillar, apparently absorbed in thought, and as unconscious of himself as he was of his surroundings.

The orchestra was playing the last bars of one of Sousa's airs, and the spirited strains were carrying many a daintily clad foot to the floor in expectant tappings. In a few moments the music would close and the musicians would file into the ball-room. Then the guests would follow, and after that the faultlessly dressed figure and the absorbed one would both be alive to the emergency, and would hasten in search of her to claim the first dance. She knew it from their isolation from the other guests, from their characteristic attitudes, from all that had gone before. If they had dreamed of her being up in the gallery, looking down on them, they would have been at her side.

It seemed very curious—to her—that these men should have been able to obtain a five minutes' hold of her thoughts and to have caused her hesitation. Five weeks before both of them had been unknown to her. During the five years she had been out in society nothing had disturbed her like this. Men had bowed before her beauty, her wit, her womanliness and charm, and her eyes had not drooped nor her voice faltered. When occasion had risen to say "no" she had said it calmly. And here she was gazing down at two men, unable to decide which should have the first dance.

But these men were different from the others she had met—she was already acknowledging that to herself—and this dance would have a meaning that had belonged to no other. Of late there had been a new light in the men's eyes, a deeper earnestness in their voices. From their positions she knew that they were waiting as they had never waited before, and she realized that the one who obtained the first dance would feel that he had been shown a preference which would influence his future.

What should she do? What did she "want" to do? Would it not be better to arrange it so that a third party would have the dance? She could do it easily and in such a way that the men would understand and not cause her any more indecision.

She caught her breath a little at this. Did she want them to go away? Had it gone so far as that? If so, she would better make an end of it at once, and by so doing return to the old freedom, even at the cost of a little pain.

But still she gazed down into the rotunda, the pink finger pressing yet more firmly into the delicate contour of her chin. He was the best dancer she had ever met—the suave, faultlessly dressed one, of course—and she "did" love dancing. And then he was so gentlemanly in every way, so polished and innately courteous, and with such exquisite taste in social matters. He was wealthy, too, and handsome, and of good family. He had a house in the country, and a yacht and a fine stable of horses. And he loved her. She had read that in his eyes even before he had allowed it to appear in his manner. What more could any one ask than all this?

Her gaze wandered across to the figure leaning carelessly against a pillar. The face was not handsome, the dress was not faultless, and the attitude was not graceful. She even doubted if he was thinking of her; his pose suggested rather that his thoughts were far away, with his work perhaps. The ceasing of the music would of course bring him back to his surroundings, and he would seek her; but was such a man—

She dropped her finger impatiently. What nonsense it was, and she had always felt herself superior to such things. She would do as she had done in the past—let circumstances decide. The first to seek her should be given the preference, and she would not strive to bend circumstances to her will.

And yet that could mean but one thing—the faultlessly dressed one would obtain the dance, and the other be left hopelessly behind. She even doubted if he would awaken from his dreaming before it was arranged.

Several of the instruments dropped out of the air, and their owners waited for the last ringing chords to die away from the strings of the leader's violin. The faultlessly dressed man changed from one graceful attitude to another, and looked a little more expectant. Evidently he would follow the musicians very closely.

Miss Parrish's eyes swept the rotunda, lingering for a moment on the man who was waiting for the musicians to enter the ball-room, and then returned to the pillar. Even up there, with the man's eyes and thoughts elsewhere, she could feel the magnetism of his strong personality. His face was not handsome, but it was a face that attracted, and held, and was remembered. He had done rare work already, and the world was waiting confidently for him to do more.

As he leaned there against the pillar, absorbed in his thoughts, she noticed that those around looked at him from time to time curiously, respectfully, and some of them even reverently, and she wondered how this man had come to leave the workers of his own kind to seek her, an acknowledged leader of fashion. He had not been a gay cavalier like the other, of course, having no thought save that of pleasing; but when he had been in her vicinity he had sought her out in the same straightforward, earnest manner with which he had met the world and earned its respect. And in his eyes she had read the same story, growing stronger day by day, as had been revealed to her by the eyes of the faultlessly dressed man who could offer all that one might wish.

There was a slight ripple below. The last strain had rung out exultantly, and now the musicians and guests were united in one general movement toward the ball-room, some to participate, but more to look on. Miss Parrish leaned forward a little, the indecision beginning to leave her face. She could see women like herself, who loved dancing, and men with whom to cross the floor was the ecstasy of motion. The influence of the moment dominated her, and she began to run over the men—the superb dancers—who should be her partners. What had she to do with one who was coping with the stern realities of life, whose very success entailed deprivations and efforts? She was born to society and luxury, to have flowers strewn beneath her feet. What would she do with a man whose pleasure was to struggle and overcome? In very sympathy she would have to struggle and overcome, too. Wherever she was, her nature would demand to be abreast, and not behind. No, no; better than to be abreast would it be to have men at her feet. And that, the best, was already hers by right; the other must be struggled for and held by constant effort.

Down below she could see them—the one, disturbed by the sudden motion, standing erect and looking about inquiringly, as though awakened from a trance, the other already well on toward the foot of the stairs. Yes, most emphatically he was the one. His life would be her pleasure and luxury, and it would not be marred by ambition and effort.

She leaned forward, and then by some curious chance, or intuition perhaps, the two men looked up at the same instant and caught her glance. The faultlessly dressed one accelerated his movements, and pushed by several groups in his efforts to reach the stairs. He would pass the first landing, which led to the ball-room, she knew, and would hasten up the second flight to her side.

The man by the pillar had also joined the movement toward the stairs. But he was proceeding leisurely, standing aside frequently to allow women to pass in front. Presently she saw him open a passage with his arms through a group of boys, and through it guide a little old woman in a faded shawl and preposterously gorgeous bonnet. She was absurdly out of place in the gay assembly, an outsider who had come in to hear the music, and who was now eager to see the ball-room and watch the dancers. But he treated her like a duchess.

Miss Parrish bit her lips. This, then, was a fair reflex of the future. One man was already on the lower stair, eager to serve her; for the other she would have to wait.

Then followed one of the curious inconsistencies which often go toward making up a harmonious whole. The man she had already decided to be the only one worth considering would be with her in a moment; the other was still looking after the old woman. But instead of going toward the ball-room Miss Parrish turned suddenly to the little balcony which overlooked the hotel-grounds and the lake beyond; and she closed the door behind her. At its sharp click she started, then laughed lightly, ending with a half sob.

Through the closed door came the discords of the musicians tuning their instruments; but it was far away, as of something left behind. She shivered a little at the thought, and her feet began to tap an impatient protest, as though longing to be in motion. Then she turned to the world outside.

It was a perfect night, and the restfulness of it came over her like a benediction. Millions of stars gleamed in the semi-tropical sky, and over the lake a round, full moon was dropping majestically behind the silhouette of palm-fronds. She turned to the south, half expecting to see the glory of the Southern Cross.

From the cocoanut grove below came the murmur of voices—lovers who were forecasting the poetry of life, or perhaps the world-weary who were resting after its prose. A few belated sails were moving slowly down the lake toward the docks, and across the water gleamed the brilliant electric eyes of West Palm village. An occasional chirp and twitter of birds disturbed, or perhaps of birds passing from their first nap into the long night's sleep, came from the palm-tops. The rumble and moving lights of the late train swung across the long bridge and were lost among the palmettoes beyond. Then came the dull whistle of a steamer on its way to Cuba or returning, answered presently by the clearer whistle of the hotel on the ocean side.

Miss Parrish looked and listened, and the disquiet and indecision left her face, forgotten. She was lifted above the commonplace, into the majesty of the universe, and somehow it seemed to be hers of right. But how small seemed the pleasures and trivialities, and how grand the possibilities! With those stars companioning with her she felt how easy it would be to do great things, and how impossible it would be to make an ideal of the commonplace.

The creak of a boom came to her as a sail was lowered for the night, and the sound carried her back a few weeks—to the time when she had first met the two men, who were doubtless now seeking her in the gallery or the ball-room below. They had been out on a boating-trip, which she had been asked to join, and the faultlessly dressed one had been the life of the party, while the other had been for the most part silent or talking with a grave professor in the most retired part of the boat.

But on their return the wind had gone down, leaving them becalmed and without oars, and with a boatman who could not swim. The chances seemed that they would remain out most of the night, for the wind was not likely to freshen. Then it was that the other man had dropped quietly overboard and swam half a mile to the shore in search of a launch to tow them in. It was not so much the act, for any man who could swim might have done the same, but rather the unostentatious, matter-of-fact manner in which it was done, that impressed her. Would not a man like that be a good pilot to guide one through the currents and eddies of life?

A burst of music came from the ball-room. The musicians were beginning her favorite waltz. She paused a moment and let her foot beat a measure upon the floor, and glanced around. The faultlessly dressed man was standing in the passage, just at the head of the stairs. She met his gaze with a curious sensation of disappointment which brought a sudden comprehending color to her face. Then her gaze wandered.

The other was in the opposite gallery, to which he had come after an unsuccessful search of the ball-room. He was gazing down a corridor, as though waiting for her to appear. Presently something in her gaze seemed to draw his, and their eyes met. The indecision left her face.

He came forward quickly, and she waited, her head high and her lips smiling.

A VERY HONEST WOMAN

BY IDA L. BROOKS

Inez Garland was strolling through the gardens of the hotel-grounds. Luncheon was just over.

The morning train had brought a young man who looked positively interesting. As usual with such arrivals, he had been thoroughly scrutinized at the midday meal. Afterward the guests made it a point to inspect the register. Inez thought it was rude to exhibit such curiosity "even if you did feel it," which of course she did not.

So she had picked up her broad-brimmed hat, which was quite becoming—but she had not the slightest expectation of seeing any one—and had gone outdoors to make herself comfortable in the shade of her favorite tree. It was the one oak on the grounds. When its fellows were being sacrificed to make a clearing for the so-called improvement of a modern summer resort it alone had been saved on account of its size and symmetry. The other trees and shrubs were chiefly imported, or, as Inez called them, upstart foreigners.

"I wonder if he'll prove a stupid bore, like the rest of them," she was thinking. "I do hope not. The place has been so dull ever since I came. I'll take my outing earlier next year. If something doesn't happen soon I'll go home before the week's out. But he really does look interesting. I wonder what his name is? Names are funny things. Sometimes they don't fit at all. It's what we do or don't do that adds to or detracts from our names. Take Inez Garland, for instance. If I had ever done anything worth doing, that name would ring very pleasantly in people's ears. But as it is—pshaw!"

Musing on names and people, she came in sight of the old oak. Its leaves were moving gently, as it breathed in the summer air. She had almost reached it before she saw, stretched out beneath its sheltering boughs, a masculine form. Could it be? Yes, it was—the new arrival. The gods are not always angry!

She stopped, hesitated a moment only, then went on. His eyes were closed. He could not have noticed. She would do it. What matter?

"Why, George," she said, "you here before me? I thought I left you in the dining-room."

The young man opened his eyes slowly—there was just a suspicion of a twinkle in them—and lazily pulled himself to a sitting posture.

"Good-afternoon," he said.

"Oh! I beg your pardon." Inez flushed, seemingly very much confused and surprised. "I thought you were my Cousin George. I so often find him lying under my oak."

"Is this your oak?" he asked, rising and smiling. "I beg—"

"No, no.. I wish you hadn't gotten up. I have acquired the habit of calling it mine, because I enjoy its shade so much, and, strangely enough, no one has disputed my claim. It was exceedingly ungracious of me to make such a remark when you were in possession. Do lie down again." She was about to walk on.

"Impossible. I gladly relinquish in your favor. But don't you think there's room enough for two?" The twinkle was more apparent now.

Inez laughed merrily. "I believe there is," she said, stepping across the flower-bed to the disputed territory and settling herself comfortably in the welcome shade. George Ferrar sat down beside her.

"I appreciate being called George more than you can imagine. I have been with strangers for over two months."

"Is your name George?"

He nodded.

"Chance was kind. I don't believe my cousin would have appreciated it particularly. He says that I have become 'a downright female bore, the worst of the species.' I'd lend him my pity if his impertinence did not demand my censure."

"I can't see that he is especially in need of sympathy."

"You see," she said, wrinkling her forehead coquettishly, while the corners of her mouth smiled at the implied compliment, "George is the least uninteresting person I have discovered, and that is why I grant him so much of my society. At home he does very well as a last resort. Naturally he doesn't feel greatly flattered. I have always enjoyed myself here before. But it's dull enough this season to please a Philadelphia spinster."

"Dull, you say? That just suits me. I was afraid I had been unwise in coming, for I need a good rest. I haven't had one for three years." He leaned back against the big tree-trunk, and half closing his eyes surveyed the peaceful view stretching out before him.

Inez looked down at him sympathetically. To think of not resting for three years! She simply could not exist without her annual relaxation—from what?

"There are many places you'll want to visit while you're here. Most of them are at a distance, but after two or three days I dare say you'll feel like doing them. The falls are quite near. You can hear them now if you listen. How pleasantly the water sounds, dripping and dashing, on a warm day like this. The location is certainly delightful. But I've seen it all so many times that I spend my time now trying to keep cool."

"I guess it's always so here, isn't it?" he asked, glancing up at his self-appointed information-bureau.

"Yes," she replied, snipping the blades of grass with her pretty fingers. "I spend most of my time here."

"I should like to."

"You may."

They were laughing at each other, but hardly wishing to acknowledge it.

"Conventionality is tiring," the young lady remarked, quite irrelevantly.

He agreed with her.

"That's what makes it so unendurable here. I haven't seen a single deviation from the established code of—"

Ferrar glanced up at his companion. She was gazing disconcertedly down the path. His eyes followed hers. Cousin George was coming toward them.

Cousin George had been making grimaces of horrified surprise at his wayward relative. He certainly had reason for it. The attitudes of the couple were easy in the extreme. The fact of their being there was a menace to the propriety of Norton's. His face assumed its wonted repose before the new-comer observed him.

"There is my cousin now," Inez remarked, with a colossal effort to appear at ease.

"Does he think conventionality tiring?"

"Yes," she answered, without looking at the mischievous brown eyes.

She beckoned her cousin to join them.

"My cousin, Mr. Downey, Mr.—George—" What was his other name? Her confusion was genuine this time.

"Ferrar, Inez. It is well to look at the register sometimes." Downey laughed good-humoredly at her as he shook hands with her victim, which was the way he designated him afterward.

"She seems quite familiar with your first name," remarked Downey.

"Yes; in fact, she addressed me by it immediately. I was just telling her how I enjoyed it."

Their banter for some time precluded the possibility of a word of explanation. But Inez was not easily flustered, and long experience had taught her to take teasing gracefully. Finally she made her cousin listen, and told him how she had mistaken Mr. Ferrar for himself lying under the tree, how she had spoken to him, and all the rest of it.

"I consider your mistake quite a fortunate one," said Downey, with a hardly perceptible stress on the word "mistake."

They spent a very pleasant afternoon together, and had become good friends by the time dinner was announced. The other guests—of whom the better part were ladies—seemed quite dejected at the turn affairs had taken.

In the evening it was customary to assemble around the tiny jasmine-covered station to await the arrival of the evening train and a new contingent of guests. It was only occasionally that the down train, on which Ferrar had come, made a contribution.

The cousins and their new acquaintance were there with the rest. As the train reached the station Inez recognized an old friend, whom she had not seen for some time, smiling down at them from the platform.

"Why, George, there's Dolly!" she exclaimed.

"So it is." But it was not Downey who replied.

Dolly's arrival was not altogether a surprise to Ferrar. As she alighted he received her in a warm embrace. Inez gasped, then laughed gaily.

"How stupid of me not to recognize the name! Don't you remember? Dolly married George Ferrar last fall."

"Certainly, you pretty dear. I've just been congratulating the poor fellow on not having made a worse mess of it than he did."

"Oh! Dolly, preserve me from these wretches!" she cried, running toward her friend, and after the satisfactory completion of the regulation feminine elaborations, tightly clasping her arm. Whereupon Ferrar proceeded with great gravity to introduce his wife.

"My wife, Miss—Inez—" He had not heard her other name.

To Dolly's great amazement they all burst out laughing. Downey came to the rescue and endeavored to explain, but Inez's frequent protests and Ferrar's interpolations made the elucidation of matters surpassingly bewildering.

They had reached the hotel by this time, and Inez was face to face with her tormentors.

"Miss Inez," said Ferrar, "you remind me of one of Shakespeare's women."

"In what way, if you please?"

"She was 'a very honest woman, but something given to lie!'"

THE WAY OF THE WHITE ROSE

BY ALICE E. ALLEN

Out in the glad green garden
  There grew one spotless rose—
The whitest and the sweetest
  Of any flower that blows—
Safe locked within her petals fine
A drop of Love's rare wine.

The North Wind came and sought her.
  "Thou'rt far too cold," she said.
The East Wind wept and pleaded.
  She shook her fair young head;
Her pure, proud petals fold on fold
Still hid her heart of gold.

The South Wind wooed her gently.
  She liked his winning ways,
And swayed a little toward him
  To listen to his praise.
But from them all—shy little elf—
She kept her sweetest self.

Until one splendid morning
  The ardent West Wind kissed
Her quivering, snow-white petals,
  And whispered, "List, oh, list;
I come—I claim thee for my own—
Thou art my Queen alone!"

And, Love's own wondrous marvel—
  At his imperious word
The radiant rose in rapture
  Her perfect petals stirred,
And in that happy, holy hour
Bloomed forth—a peerless flower.

WHAT A MAN WORKS FOR

BY ADA BENTWICK STONE

[CONCLUDED]

"YES, I did say that. May I ask what that has to do with anything?"

"Let 'me' ask, when you come down to it, what Sam was working for—devoting all his energies to? What kind of a home were you making for him, Deborah? He is a man who loves neatness and order and beauty. He furnished you with the means to make his home perfect in these respects. And how did you use these means? Just think for a moment how Sam's home looked that first week—and for how long before that I can only guess. The furniture awry or out of place, the rooms dusty and cluttered, and nothing really clean and sweet. There could be no rest or comfort in such a place, for wherever the eye turned it was offended.

"Most of all was it offended by you, with your untidy hair—Hush! Let me finish, now that I have begun—by your untidy hair, your shabby, ragged shoes, your torn apron—and your wrapper. Words fail me to express my detestation of your wrappers, drabbled and worn about the hem, more or less soiled on front and sleeves, with here and there a rent, always gapping either above or below the waist-line because of a lack of buttons, and giving glimpses of your underclothing, and you with a futile habit of clutching it together when you chanced to remember it. Think of the pathos and the pity of it! A man who lives only for his home, and the presiding genius of it an object like that.

"Do you remember how dainty and pretty you always kept yourself when he was courting you? You never gave him cause then to be ashamed of you.

"But this isn't the saddest feature of the case. There is Nannie. These are the years in which her character is forming, and if now she acquires the habit of being careless and slipshod about everything she does, and neglectful of her dress, the habit will cling to her through life. She will grow into a slatternly woman, and no work she ever undertakes will be thoroughly done.

"Now, to do well the work that is given us to do is the vital part of religion—it is love to the neighbor. Each of us is a part of the great universe, and if we slight our work, by just so much we hinder all the rest and make their work less effective. It must be so.

"There! That is all! You understand now why I was sorry for Sam and Nannie, and have tried to make things pleasant for them. If there was any excuse for your doing outside work—"

"There is an excuse. I like to work out of doors, and I hate housework. I always did hate it," Deborah interrupted, hotly, between her sobs.

"Is that an excuse? When you married Sam wasn't there a tacit agreement that he should furnish the means and you should make the home? Is such a solemn agreement to be lightly set aside? And if you really love your husband, Deborah, it seems as if you would be willing to deny yourself something for the sake of his happiness.

"And, aside from that, I honestly believe that if you would try to excel in your housekeeping you would at least not hate it. No one can by any possibility enjoy work that is botched in the doing.

"There, dear, don't cry so; you will make yourself sick! I haven't said what I did to hurt you, but just to make you see. I couldn't bear to have you keep on neglecting a beautiful opportunity for something of so much less worth. If you were in poor health and not able to do the work, or Sam needed you on the farm, I would never have spoken. But you are strong, and you have such a pleasant house, with everything in it so nice and convenient, and you and Nannie do look so pretty and attractive when you are dressed neatly—

"Can't you forgive me my plain speaking, Debby?" she pleaded, as the face continued hidden and the sobs did not abate.

"No, I can't," her sister answered. "I wish you would go away. And I don't want any supper; if you bring it up I sha'n't touch it."

Half way to the door Milicent stopped. "There is one thing more," she said, coloring and hesitating. "You seem to suspect me of having designs on Sam. Some people would never forgive a suspicion like that, but I make allowances. What I want to say is that I—am engaged to be married to some one who—well, I mean no reflections on my brother-in-law, but I do care a very great deal more for—this person than I do for Sam, and I like Sam, too. We weren't meaning to tell any one till he came back from the Philippines, but I couldn't bear that my own sister should think so meanly of me."

That afternoon Sam was bothered by a man who came to see about buying a cow, and it was almost dusk when he ran up-stairs to Deborah's room.

"How are you feeling to-night?" he asked, a little dubiously.

"Ever so much better," she answered; and her voice was so gentle that it made him wonder. "Are you glad?"

"Glad!" he laughed. "Why, when you get on your feet again, and are here and there as you used to be, you won't find a happier man anywhere around than I shall be. Though Milly has done amazingly well," he added. "You would be surprised to know how well. I had no idea what a very capable girl she was."

"Sam?" Her tone was constrained, though she evidently made an effort to speak pleasantly.

"Yes?"

"Don't you like Milicent—very much?"

"Like Milly? Why, certainly I do."

"Don't you like her better than you do—me?"

He stared at her. "I can't say I admire your taste in jokes," he answered.

"But, Sam, I mean it. Don't you?"

"Like your sister better than I do you? Why, Debbie, you insult me by even imagining such a thing. I think a great deal of Milly, of course; she's an uncommonly nice little girl, and nobody could help it. But, Debby, you are my wife!" There was offended dignity in his tone, and tender reproach.

Deborah Kilder reached up her arms, and, clasping them about his neck, drew his face down to hers. "Sam," she whispered, "you are the best and dearest husband a woman ever had, and—but I won't make any promises. Only be patient a little longer, Sam dear, that is all. And, Sam, when you go down, tell Milly that I would like some supper, after all, and that I—forgive her, and—and thank her. She will understand."

THE ROSE AND THE GAUNTLET

Low spake the knight to the peasant girl,
"I tell thee, sooth, I am belted earl;
Fly with me from this garden small,
And thou shalt sit in my castle's hall;
Thou shalt have pomp and wealth and pleasure,
Joys beyond thy fancy's measure.
Here with my sword and horse I stand,
To bear thee away to my distant land.
Take, thou fairest, this full-blown rose,
A token of love that as ripely blows."
With his glove of steel he plucked the token,
But it fell from his gauntlet, crushed and broken.
The maiden exclaimed, "Thou seest, sir knight,
Thy fingers of iron can only smite,
And like the rose thou hast torn and scattered,
I in thy grasp would be wrecked and shattered."
She trembled and blushed, and her glances fell;
But she turned from the knight, and said, "Farewell!"
"Not so," he cried, "will I lose my prize;
I heed not thy words, but I read thine eyes."
He lifted her up in his grasp of steel,
And he mounted, and spurred with furious heel;
But her cry drew forth her hoary sire,
Who snatched his bow from above the fire;
Swift from the valley the warrior fled,
Swifter the bolt of the cross-bow sped,
And the weight that pressed on the fleet-foot horse
Was the living man and the woman's corse.

That morning the rose was bright of hue;
That morning the maiden was fair to view;
But the evening sun its beauty shed
On the withered leaves and the maiden dead.

—John Sterling.

How to Dress

OUR FASHIONS

It is well said "There is nothing new under the sun." Nothing new but what is a revival of something long forgotten. However, some of today's styles are within the memory of many who are not yet old. The short and long silk coats date back only to the forties, and even the sleeves having the appearance of originality are combined styles of the early and middle part of the last century. Gowns opened in the back are remembered by many an old lady as one of the torments of her maidenhood, but they return periodically to tease anew another generation of girls.

STREET COSTUME

The illustration of a street costume, made of écru etamine, is a very serviceable dress for all-around wear. The skirt is seven-gored, has the desired flare, and is trimmed with brown moire piped with white. The waist is the popular "Gibson" style, and can be used with or without the postilion attachment about the waist. A vest of cream-white or a color can be worn with it. Bands of the material, with a piping of the key-note color of the material, is a favorite trimming for all gowns, whether of wool or cotton.

MONTE CARLO COAT COSTUME

This costume is one of the most attractive ones of the season. The coat is one of the smartest shown.

MONTE CARLO COAT COSTUME

It is made of taffeta pongee and linen as a separate wrap, or of the suit material and worn entire.

The black taffeta silk coats are worn by both grown persons and children, and are trimmed with the heavy écru and Irish-point laces. There are many different models—some long and some short.

For an elderly person there is no more appropriate wrap. For them the heavy black laces would be a better trimming.

Very elegant hand-made laces appear upon some of the new costumes fashioned from silk soutache braid made upon the Battenburg lace patterns, the filling-in fancy stitches and spider-web work being put in with black silk thread. These would be expensive to buy, but any girl who is clever at this kind of fancy work can soon produce something original and out of the ordinary for her own wardrobe. It is these little individualities that make some girls appear well dressed at a less expense than another who depends entirely upon her dressmaker.

The little accessories made at home, consisting of a turnover collar, cuffs and strip for the front embroidered on the plain art linens, dress up even an inexpensive dress. One seen in the stores recently was of pink art linen with an embroidered edge of white silk, the body of the material being covered with stars in black silk.

Made stocks are taking the place of soft ribbons for the neck. One made of white satin, with a turnover hemmed and the points filled in with French knots in three pale colors—pink, blue and green—having the ends pointed and trimmed the same way, makes a very pretty neck-finish. Some use soft narrow ribbon for ends, tied in small bows on the extreme end. Choux for the hair, composed of bunches of these tiny bows, are made to match. White is a favorite color in everything this season.

GIRL'S BLOUSE COSTUME

This is always a suitable style for a little girl's dress. It lends itself kindly to all materials. In serge

CHILD'S SAILOR SUIT

or flannel it is a good cool-day dress. In piqué or in the blue linens it is a little more dressy, being trimmed with heavy braid or embroidery. They are easily renewed, and a girl's wardrobe can well contain three or four of them. It is a dress that is easily made, and it is always in good style.

While white braid is a favorite trimming for the blue wool dresses, linen braid can be used upon white goods, with fagot-stitches in black silk or other colors between the rows of braid. Or the braid can be heavily studded with French knots in heavy white linen thread or black purse-silk. This is also used very much upon some of the coarse laces.

Some of the blouses are trimmed with facings of white silk, over which lace is laid. It would scarcely be appropriate for a child under twelve, but at that age and over it makes a very stylish suit. Tub-dresses are more suitable for small children.

Any of these patterns furnished from this office for ten cents. Waist and skirt can be purchased as separate patterns.

Street Costume.—Waist, No. 4130. Bust measures, 32, 34, 36, 38 and 40 inches. Skirt, No. 4069. Waist measures, 22, 24, 26, 28, 30, 32 and 34 inches.

Summer-afternoon Dress.—Waist, No. 4128. Bust measures, 32, 34 and 36 inches. Skirt, No. 4101. Waist measures, 20, 22, 24 and 26 inches.

Girl's Sailor Suit, No. 4133. Sizes, 8, 10, 12 and 14 years.

Monte Carlo Coat Costume.—Coat, No. 4135. Bust measures, 32, 36 and 40 inches. Skirt, No. 4069. Waist measures, 22, 24, 26, 28, 30, 32 and 34 inches.

Shirt-waist Suit.—Waist, No. 3851. Bust measures, 32, 34, 36, 38 and 40 inches. Skirt, No. 4134. Waist measures, 22, 24, 26, 28 and 30 inches.

SUMMER-AFTERNOON DRESS

This dainty gown fashioned from any of the soft-finished cotton materials is a favorite style, suited to all moderate occasions. While our model is of white dotted swiss muslin trimmed with cream guipure lace, some of which are very inexpensive, it can be produced in any of the soft lawns or other sheer fabrics. In pure white it is a very suitable model for a graduation-dress, or it could be used as a wedding-dress. The season's thin fabrics have a wide range in hair-stripes, small figures and polka-dots, which are always distinguished-looking. Large figures are only in the

SUMMER-AFTERNOON DRESS

novelties that are as fleeting as the season itself, and can only be indulged in by those who can cast them aside at the season's end. Many of the batiste lawns in the rich dark blues are as dressy as a foulard silk, and are trimmed much the same, with black or white medallion lace. This latter trimming is much in vogue this season.

A SHIRT-WAIST SUIT

This is a costume which, though practical, should always have a smart appearance. It can be conceived of dull blue stitched with black, and worn with a tie and belt of blue edged with black and white. The waist is tucked at the shoulders and for the entire

SHIRT-WAIST SUIT

length of the back, and is one of the most becoming of the many styles of shirt-waist models shown in the stores. The skirt includes the new side-plaits, that are stitched flat at the upper portions, and conceal the seams, but fall free at the flounce-depth to provide graceful fullness.

Wit and Humor

AN UP-TO-DATE WEDDING

The wedding swell was going well,
  A splendid sight to see;
Out rang a voice, clear as a bell,
  "This wedding cannot be!"
The organ stopped, the bride had dropped
  Back fainting 'mid the palms,
So when in rage the bridegroom hopped
  The speaker felt some qualms.
"I only said you should not wed"—
  He spoke with covert laugh—
"Until three minutes shall have sped,
  When I start the biograph!"

—Baltimore American.

UNCONSCIOUS SATIRE

"WHAT kind of children go to heaven?" asked the young lady Sunday-school teacher.

"Dead ones," replied the matter-of-fact scholar.

OUGHT TO BE HAPPY

"I don't see why Long Jim Jones shouldn't be happy," said the Georgia native. "He's got six fiddles, ten children, and a moonshine still that the government ain't spotted yet."—Atlanta Constitution.

QUICK AS LIGHTNING

Bill—"Have you seen that woman lightning-change artist at the theater?"

Jill—"No. Is she good?"

Bill—"Great! Why, she puts on her bonnet in less than fifteen minutes!"—Yonkers Statesman.

STOPPED THE GAME

"What broke up the Ping-Pong social down at your church last night?" asked the young man with the clerical garments.

"Some unregenerate son of Belial," said the second man in churchly garb. "He substituted eggs for balls."—Judge.

TIME!

Pa (from upper landing, to daughter entertaining her "steady" in the parlor)—"Gladys, what time is it?"

Gladys—"I don't know, pa; our clock isn't going."

Pa—"How about George?"—Richmond Dispatch.

MODEST MARK

The business methods of publishers came up for discussion at a recent literary gathering. William Dean Howells and Mark Twain were present.

"The spirit of the age is strenuous," said Mr. Howells, "and in order not to be behind the times the publishers modify the verbiage of the circus poster with scant politeness."

"They do," assented the humorist. "My publisher speaks of advertising my next book as a story by Mark Twain, with no further comment. But he sha'n't make a holy show of me with his vulgar advertising simplicity. I shall insist upon a street-parade at the very least, because I am a modest man, and dislike to be made conspicuous."—New York Times.

BELGIAN-HARE JOKE

In one of the public schools recently, a number of the small pupils were busily engaged in working problems in multiplication, with more or less satisfactory results.

After some time the teacher noticed one little fellow who seemed most unhappy. His cheeks were flushed, his hair tumbled, and tears were very near the surface. The teacher said, in a kindly tone, "Well, John, what is the matter?"

"Oh, dear, I wish I was a rabbit!" replied the boy.

"A rabbit!" exclaimed the teacher, in astonishment. "Why on earth would you like to be a rabbit?"

"Well, my papa says they multiply so fast."—The Gentleman's Magazine.

WILLING TO OBEY

This tale was told by Judge Pennypacker in beginning a response to a toast at a Pennsylvania-German banquet in Philadelphia. The story, he said, showed the readiness of the Pennsylvania Dutchman to obey those in authority:

"In 1864 Sheridan, under orders, burned every barn from a valley above Staunton to a certain point below Winchester. A band of angry rebels followed this raid, watching for a chance to pick up any stragglers. Among others who fell into their hands was a little Pennsylvania Dutchman, who quietly turned to his captors, and inquired, 'Vat you fellers goin' to do mit me?'

"The reply came short and sharp, 'Hang you.'

"'Vel,' he said, meekly, 'vatefer is der rule.'

"His good-natured reply threw the Confederates into a roar of laughter, and saved his life."—Philadelphia Times.

ELI'S IRISH-DIALECT STORY

Eli Perkins told the following Irish story that occurred when he was on General Chetlain's staff in Memphis:

"After scouting down in Mississippi one day I sent Corporal Mike Donan into the hospital tent to see how badly Patrick Kelly was wounded.

"'Howly Moses, Pat,' said Mike, 'yez pale as a ghost. In th' name iv th' virgin, do yez be afther dyin'?'

"'Mike Donan,' said Pat, opening his eyes, 'an' is thot yers'lf?'

"''Tis?'

"'Well, yez knows thot blatherin' spalpeen iv an Oirish drummer from Kalamizoo?'

"'Thot I do.'

"'He bet me a dollar to a pint just before th' battle thot I couldn't schwally an egg widout breakin' th' shell—th' shell iv it.'

"'Naw!'

"'Yis.'

"'Did ye do it?'

"'I did.'

"'Then fwat's ailin' ye?'

"'It's doon there,' laying his hand on his stomach. 'If I joomp about I'll br'ak it an' cut me stummick wid th' shell. If I kape quiet th' thing'll hatch oot an' I'll have a Shanghai rooster a-clawin' me insides.'"

The Young People

THEY'LL SOON BE MEN

Oh, flashing eyes of boyhood,
  And boyhood's beardless cheek,
The kingdom you are coming to
  It is not far to seek;
For the hastening years are bringing
  The unborn future nigh;
The land we love is waiting you
  To serve her by and by.

And oft when greed of evil hearts,
  And sordid lust of gold,
Send shame and grief to loyal souls,
  As the piteous tale is told,
Our courage springs to bear the ill,
  In hope of days to be,
When they who wrote and they who rule
  Shall worthily be free.

Yes, in the busy school-room now,
  And on the thronging street,
And in the field, and on the farm,
  With joyous look we greet
The eager, bright, truth-telling boys,
  Who mean such grand things when,
God helping them, they reach the line
  When boys—how soon!—are men.

—Mrs. M. E. Sangster.

BENNY'S HAPPY THOUGHT

BY ELLIOT WALKER

IF BENNY'S mother could have seen him crawling out upon that log she would have been horrified, for the bark was slippery and the brook was deep. But her little boy's mind was too intent upon the big trout under the rock to care for the probable anxiety of others, and he had only left the little stream, where he was permitted to fish for dace, to peek in the forbidden big brook just to see if there was anything there.

What he had seen put his rather easily soothed conscience to sleep at once.

"My! what a whopper! It ain't a sucker—it's a trout!" he gasped. "How can I catch him? If I can crawl out far enough my pole will reach, and maybe he will bite," he thought, in great excitement.

Carefully baiting his hook with a fat worm, he wriggled along to the end of the log, and dropping in his lure, fished patiently. No use! Big trout do not care for worms in the daytime unless it rains.

"He won't take it!" thought Benny, mournfully. "I'll get him somehow. Uncle Jack said big fish eat little ones. I wonder, now!"

Yes, it is a poor fisherman who will not use his small fish to catch a larger one, and so Benny's wonder resulted in a very diminutive but precious shiner being clawed from his pocket—a basket was of no use to Benjamin—and hooked on in place of the despised worm.

"There; I'll skitter him 'round by the rock, and maybe he'll grab him," whispered the boy, with renewed hope, as the tiny white sides glistened in the ripples.

The next moment he was wildly gripping the old tree-trunk with his knees, and tugging at his stout pole for dear life. It was simply a case of main strength—the tackle held, and Benny was stronger than the trout.

"I've got him! I've got him!" he yelled, scrambling backward to the grass where his prey lay flopping. "Takes me, I tell yer!"

For a long time Benny admired his prize. He counted all his spots, spread out his fins, looked down his throat, held him up by the tail and guessed all sorts of weights. Then he strung him on a stick and ran joyously home.

"A pound and a quarter—a beauty!" said his father, balancing the scales. "You never caught him in the little brook, Ben!"

"Ain't he a corker!" observed his son, trying to avoid an inquiring eye. "Oh, yes! I just dropped into the other brook going by, and he was right there. I was six feet from the bank when he bit. Honest! I was!"

AN INCIDENT FOR THE BOYS

At the head of an important department in one of the great stores in New York City is a man with an interesting history. His career affords a fine illustration of the kind of spirit that wins in the business world of to-day. Only a few years ago he appeared at this store as an applicant for a position.

"No place for you," gruffly said the manager.

"But I've got to have a place," persisted the man. "My family will starve unless I get something to do. Look at me. Things have gone against me, but through no fault of mine. Am I a decent-looking fellow?"

"Yes, you are," replied the manager, "but I have no place I can give you."

"But my wife and children are dependent upon me, and will soon be at the point of suffering unless I get work. Is there not some way in which I could be useful and for which I could receive a sufficient amount with which to buy bread at least?" There was an earnestness of voice and manner which finally made its appeal.

"What are you willing to do?" said the manager.

"Anything and everything," replied our friend.

"Well, I suppose I could give you a place as sort of lackey boy. You will have to do plenty of work, some of it very disagreeable, and your pay will be but six dollars a week."

"All right, sir, I'll take the job, and I thank you for it."

Thus humbly did he begin. He studied to make himself useful. He was one of the first to be on hand in the morning, and often lingered after close of hours to put everything in perfect order for the next day. He did not wait to be told what to do. He could not have taken a livelier interest had he been one of the proprietors. In a short time promotion came. After a few months he was put in charge of a delivery-route. Some way he found time to do much extra work. Every day he brought in new orders for goods. The increase of trade on his route attracted attention. Little by little he won his way until he was placed at the head of a most important department. For several years he has drawn a salary of eighteen thousand dollars a year. How silly the cry that there are no opportunities for young men in business! There were never better opportunities than now. Push, pluck and a right spirit are the great needs, and are sure to win.—Rev. William F. Anderson, in Epworth Herald.

WILLIE'S TROUBLES

"What's the trouble, Willie?" said Mrs. Brown to her small son, who was crying.

"My kite won't fly," sobbed Willie, "and I made it out of fly-paper, too."—The Little Chronicle.

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Third Prize	$100.00 Cash
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40 Prizes, $5.00 each	$200.00 Cash
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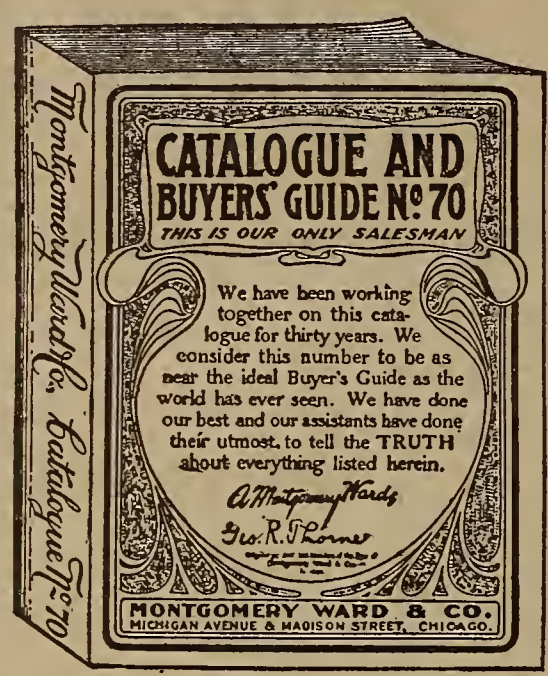

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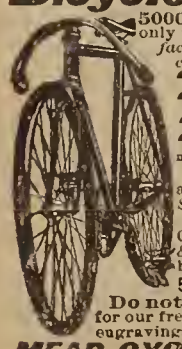

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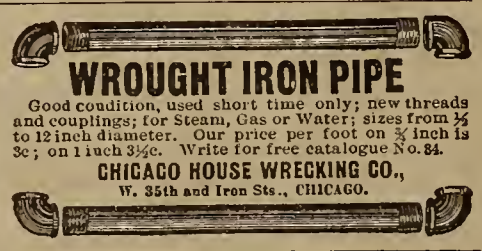

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FARM AND FIRESIDE

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COMMENT

THE HIGH PRICE OF BEEF

In the June number of the "World's Work" Mr. G. W. Ogden explains the causes of the present high price of beef as follows: "The high price of beef is due to two causes: First, the scarcity of feed in that section which furnishes fat cattle for the market during the winter and spring months, and second, to the increased consumption at home and the ever-growing export trade as opposed to the limited expansion of the live-stock industry. The scarcity of feed in the section indicated is due to the drought of last summer, which cut the corn, hay and cotton crops to less than one half the regular yield."

Regarding the outlook for the future he says: "It is questionable whether, under the most favorable circumstances, beef will ever be as cheap in the United States again as it was five years ago. Since that time there has been a gradual increase in the price of live cattle, and a corresponding increase in the dressed meat. Then consider the increased consumption at home and the growing export trade against the comparative standstill of the live-stock industry.

"There are fewer cattle in the United States today, in relation to the population of the country, than ten years ago; this notwithstanding the government animal census of 1900, which apparently proves the contrary. Cattle-growers explain the animal-census figures by saying they look big because it is the first correct census ever taken.

"The receipts of cattle at five Western markets for the ten years ending 1891 were 6,500,000; for the ten years ending 1901, 7,166,856, or a gain of 666,856. Compare this slight increase to the gain in the country's population in the corresponding length of time, and add to it an increase of twenty-five per cent in the export trade, and you have the primary cause of high-priced beef."

AFFAIRS OF NOTE AND MEN OF MARK

PEACE REIGNS IN SOUTH AFRICA

The inevitable end of the unequal struggle which began October 11, 1899, between the Boers and the British was announced in Lord Kitchener's official dispatch from Pretoria, dated May 31, 1902, reading: "The negotiations with the Boer delegates have been concluded. Documents containing the terms of surrender were signed this evening at 10:30 o'clock by all the Boer delegates, as well as by Lord Milner and myself."

The terms of surrender as officially announced in Parliament are in the main as follows:

The burgher forces in the field will forthwith lay down their arms and hand over all guns, rifles and munitions of war in their possession or under their control, and desist from further resistance, and acknowledge King Edward VII. as the lawful sovereign.

All burghers outside the limits of the Transvaal and Orange River Colony, and all prisoners of war at present outside of South Africa who are burghers, will, on duly declaring their acceptance of the position as subjects of His Majesty, be brought back to their homes as soon as means of transportation can be provided and means of subsistence be assured.

The burghers so returning will not be deprived of their personal liberty or property.

No proceeding, civil or criminal, will be taken against any burghers surrendering or so returning, for any acts in connection with the prosecution of the war. The benefits of this clause do not extend to certain acts contrary to the usages of war, which had been notified by the commander-in-chief to the Boer generals, and which shall be tried by court-martial after the close of hostilities.

The Dutch language will be taught in the public schools of the Transvaal and Orange River Colony where the parents desire it, and will be allowed in the courts of law for the better and more effectual administration of justice.

Possession of rifles will be allowed in the Transvaal and Orange River Colony to persons requiring them for their protection, or taking out a license, according to laws.

The military administration of the Transvaal and Orange River Colony will, at the earliest possible date, be succeeded by a civil government, and so soon as arrangements permit, representative institutions, leading up to self-government, will be introduced.

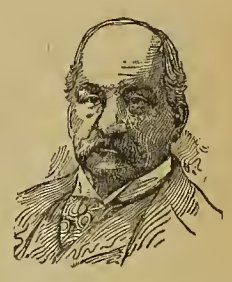
No special tax will be imposed on landed property in the Transvaal or Orange River Colony to defray the expenses of the war.

As soon as the conditions permit it, a commission, on which the local inhabitants will be represented, will be appointed in each district of the Transvaal and Orange River Colony, under the presidency of a magistrate or other official, for the purpose of assisting in the restoration of the people to their homes, and supplying those who, owing to war-losses, are unable to provide for themselves, with food and shelter and the necessary amount of seed, stock and implements, etc., for the resumption of their normal condition.

His Majesty's government will place at the disposal of these commissions the sum of three million pounds, and will recognize all the notes issued under the law of 1900 of the South African Republic, and all receipts given up to officers in the field of the late republics, or under their orders, to be presented to a judicial commission, which will be appointed by the government; and if such notes and receipts are found by this commission to have been duly issued in return for valuable considerations, they will be received by the commission as evidence of war-losses suffered by the persons to whom they were originally given.

In addition to the above-named free grant of three million pounds His Majesty's government will be prepared to make advances on loan for the same purposes, free of interest for two years, and afterward repayable over a period of years with three per cent interest. No foreigner or rebel will be entitled to benefit under this clause.

Nowadays, as soon as the formation of a new giant corporation is rumored, men look for the figure of J. Pierpont Morgan, and if there is anything in the rumor it is sure to loom up. He is involved in so many that one familiar with the operations of the great promoter describes the present situation as follows:



"Morgan has taken the big corporations and stacked them up like a pile of bricks. So long as every one of them is kept in place all stand, but take one out and there is danger that all will come tumbling together. Shrewd men see this situation, and take advantage of it. Morgan's responsibilities are so great that he can be held up by men who threaten trouble. For instance, a man like Gates suddenly bobs up, and says, 'That row of bricks is all right, but I have a string around the L. and N. brick, and I think I'll pull it out.' 'For heaven's sake, don't do that!' exclaims Morgan; 'you'll pull the whole thing down.' 'Then buy my brick.' And Morgan buys the brick, paying millions more for it than Gates paid."

Lord Pauncefote of Preston, the Ambassador of Great Britain to the United States, and Dean of the Diplomatic Corps at Washington, died May 24, 1902. Sir Julian Pauncefote succeeded Lord Sackville as Minister to Washington in 1889. In 1893, when Congress authorized the President to raise the rank of the most important American missions abroad, he became the first foreign Ambassador to the United States. In diplomatic history his name is linked with affairs of the highest importance, such as the Behring Sea Settlement, the Anglo-Venezuelan Boundary Arbitration, the Hague Conference for International Arbitration, reciprocity treaties and the Hay-Pauncefote Isthmian Canal Treaty. For his able and faithful services he received unusual, but deserved honors from his own government, while this country regarded him as a valued friend.

Within recent years the office of secretary to the President has become one of considerable importance, requiring tact, skill and executive ability of the highest order for the perfect performance of its duties. Mr. George Bruce Cortelyou, the present secretary, began his work at the White House in 1895 as stenographer to President Cleveland, and shortly after became executive clerk. Under President McKinley he became Secretary Porter's assistant. When Mr. Porter retired Mr. Cortelyou was again promoted, and has been retained as secretary by President Roosevelt.

Notable among the younger men in public life at Washington is Joseph Walden Bailey, who was elected to Congress from the fifth district of Texas in 1891 at the age of twenty-seven. "Young Mr. Bailey," as he was then named, soon forged to the front, and became the acknowledged leader of the Democrats in the House, and was their candidate in the fifty-fifth Congress for speaker against Thomas B. Reed. After serving five terms in the House he was elected, last year, to the Senate. Senator Bailey is now regarded as a "probability" for nomination as a presidential candidate.

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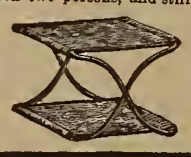

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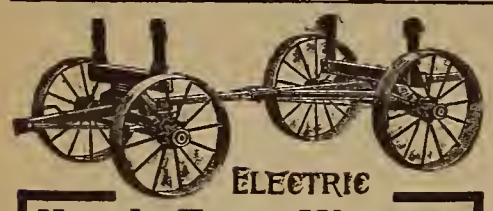

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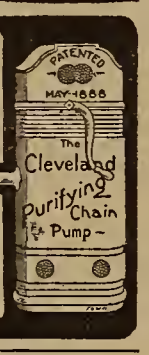

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Would $500.00 in cash come handy? This is the amount of the first grand prize in the Dot Contest. For particulars see Pages 18 and 19 of this paper.

Mr. Greiner Says:

THE SPRAYING PRACTICE.—The practice of spraying fruit-trees, vines and garden crops, which took a slow and cautious start little more than a dozen years ago, has now become almost universal. Where people do not possess the facilities for doing their own spraying, they have at least become so fully convinced of the desirability or necessity of the practice that they try to get some neighbor who has all these things to do their spraying for them. In this we have an instance of the infectiousness of a good example—the example set to all by the progressive and successful grower of fruits. The idea which I suggested and advocated years ago, of having professional tree-doctors—that is, people who would fit themselves out with modern spraying devices and materials, and then do the spraying for a whole neighborhood at a fair consideration—has taken slow root, but is now in a fair way of being realized. In many localities we find people who can be hired to do spraying for others. Whether they always do it well is another question. The large fruit-grower who has the knowledge and experience of when and how spraying should be done has his hands full at the proper times for spraying, and could not be hired at double wages to spray for others and leave his own spraying undone, or put his own off even for a few days. You can neither hire him to do your spraying nor hire his spraying-outfits with which to do the work yourself.

OWN YOUR SPRAYER.—Just at the time that you wish to spray every fruit-grower who owns a sprayer has his outfit in full use. The only course which would enable you to do your spraying just at the proper time is to own an outfit yourself. When you have owned one for a while you will fully appreciate the force of the advice, "Neither a borrower nor a lender be." As owner you will soon learn that a sprayer needs good care, and that without the best of care it will soon give out here or there, and will need repairing and fussing and fixing. You lend it to a careless neighbor, and when you get it back you may find the rubber hose "busted," or the valves leaking, or the nozzles all clogged up, or other troubles too numerous to mention. Most likely, too, you are in a hurry to use it, and may lose time and crop by the delay. The owner of a spraying-outfit will most likely be interested enough in the whole subject to gather full information about the how and when, so as to be able to do the work in the most effective manner. Many of the professional tree-doctors, I fear (and I judge from observation), are not making their mixtures as they should be made, and undoubtedly much of the effectiveness of the operation is thereby lost. Spray we must. Everybody now seems to recognize it. It will not pay us, however, to squirt solutions hit or miss, right and left. We must know exactly what we are doing, and what we wish to accomplish.

BAT-MANURE.—A subscriber in Plato, Mo., having access to a considerable quantity of bat-manure in caves, asks about its fertilizing values and commercial rating, and how it should be applied, whether alone or mixed with other ingredients, diluents or fillers. I have never seen this material, nor have I an analysis of it at hand. I know it to be a valuable manure, however, and quite well concentrated. He might even infer that much from the feeding-habits of the animal. In all probability this manure is a "guano," and quite rich in nitrogen. Further than that I am not willing to be quoted. I will try to hunt up a trustworthy analysis. There is no need of using a diluent or filler, unless the material is wet and must be dried by adding dry muck or soil. If dry and well fined this bat-guano may be broadcasted in the same way as any concentrated fertilizer.

NEW-PROCESS LIME.—Poor lime has often made lots of trouble for me, and caused me disappointment and disgust in my spraying operations. I want the very best of fresh lime every time. A "new-process" lime is now being offered by the makers of spraying-apparatus which is claimed to be the result of a new method of treating quicklime, and which puts the lime in such condition that it will keep until used, requires no further slaking, will not heat, swell nor change, and retains the full strength and setting qualities of the lime, being always ready for immediate use when wet to the consistency of putty. Some of my neighbors have used this new lime for several seasons, and are delighted with it, as it greatly facilitates the spraying job. What say the station experts about this lime? I am using it this year.

APPLES FOR HOME USE.—A reader in Pennsylvania desires to set twenty-five apple-trees to give him a succession of fruit from earliest to latest, and would like to have some advice as to the selection of varieties. I would want one Red Astrachan, one Early Harvest or Yellow Transparent, one Oldenburg, one Gravenstein, one Twenty Ounce, one King, possibly an Alexander or Wealthy, and one Pound Sweet. These would give a succession of fruit from summer until Christmas or later. For jelly purposes you may want a Transcendant or Hyslop crab. For later use I would want a Fameuse (late fall), a Greening, a Swaar, a Pommegris (small, but good), a Northern Spy, a Seek-no-Further, a Spitzenburgh, a Rome Beauty or Sutton Beauty, a Wagener, a Tallman and a Bailey Sweet, a Yellow Bellflower, a Newtown Pippin, a York Imperial, a Roxbury Russet and a Baldwin. There you have your twenty-five or more varieties.

COW-PEA LITERATURE.—Inquiries about literature on cow-peas still come in. I have no copies of the neat little book on "The Cow-Pea," published by the Experiment Farm at Southern Pines, N. C. Direct your requests to the Experiment Farm, and a copy will be sent you. The Alabama Experiment Station (Auburn, Ala.) has also issued a bulletin (No. 118) on cow-pea culture.

Mr. Grundy Says:

"WASTE."—Many a man has made a fortune out of what other people wasted. Millions of pounds of cotton-seed were wasted before its value was discovered. When I was a boy the butchers who supplied our meat gave away the hogs' heads, legs, livers, etc., and dumped into the river tons of what they then considered waste of hogs, cattle and sheep. Every atom of this is now made valuable. There is no such thing as "waste."

There is a great deal of "waste" on the average farm for which there is no necessity. The farmer who manages to utilize and get the full value out of what most farmers waste is the man who makes farming pay. It is not so much what a man earns as what he saves that makes him successful. I know several farmers who grow great crops, and manage to obtain the best prices for them, but financially they are no better off than they were twenty years ago. They earn a large amount, but it all goes for expenses.

CARE OF IMPLEMENTS.—A few days ago I saw a man cultivating corn with what seemed to be a new kind of cultivator. In reply to my inquiries he stated that it was one he had used for twenty-two years. He said it was a little out of date in some respects, but he had put in new beams and shovels of a late pattern, and the old thing did quite as good work as those of his neighbor, who had bought four new outfits since he had bought the one he was using. It was bright with red paint, and with the exception of a number of bruises it was in fine condition. He declared that paint, and proper care when out of use, are all that is necessary to keep most farming-implements in first-class condition from twenty to thirty years.

THE CONSTANT BUYING of new farming-implements keeps many a farmer's nose on the grindstone, and has sent many into bankruptcy. Some farmers seem to be unable to resist a windy agent, and buy what they do not need. Thousands of half-worn tools are thrown aside for new ones that are no better. This is one of the greatest wastes on the farm. Buy good implements, and take the best of care of them, and they will last nearly a lifetime. It is always best to bring every implement home at night that is used during the day, and house it if the weather is the least suspicious. It takes but a minute to run an implement under a shed, and if a rain should come on during the night it will be kept dry. Rain rusts iron and swells wood. Rust soon destroys iron and steel, especially the threads of bolts and the more delicate parts of a machine, while the swelling and shrinking of wood checks and rots it. All the most successful farmers I know invariably bring in the tools at the close of the day's work. When an implement is taken apart and stored away for the season it should have a new coat of paint. The paint should be thinned with oil, then it can be applied quickly.

SHED FOR TOOLS.—Many farmers say they would take better care of their implements if they had the sheds to put them in. Lumber is expensive, and they cannot afford to build sheds that will exclude the rain, because only the best grade of lumber will do the business. Some of the best tool-sheds I ever saw were built of the very cheapest grades of lumber. Posts, siding and sheathing were all cottonwood or poplar. In two instances elm was used for sheathing. The posts rested on stones. The siding was dressed and well painted, and the sheathing was covered with heavy roofing-felt coated with a preparation that enabled it to resist the weather several years. It made the roof perfectly waterproof, while the cost was not a fourth of what it would cost for good shingles. By using this cheap lumber and roofing-felt any farmer may have good dry shelter for his implements. Room can be economized by taking apart the bulkier implements and closely packing them. Taking off the poles and shafts of such implements as hay-rakes, mowers, corn-cultivators, etc., will economize room, and it can be done in a few moments. In building a tool-shed it is always best to make a loft, in which wheels, poles and the smaller parts of the machines can be stored.

GARDEN-CULTIVATOR.—Early this spring a farmer came to have a look at my little garden-cultivator. He said he had often thought he would like to have one with which to work his garden, but feared they were not practical. I showed him how to operate the little implement, and told him I could clean out the space between the rows in less than one fourth the time it could be done with a hoe, but that the finishing, or close, touches had to be done with a hoe. About a week ago he sent word to me that he had bought a cultivator, and was cultivating his garden with it, and that he would not take a horse for it. He had doubled the size of his garden, and for the first time had a full supply of vegetables for his table. Instead of the little square beds in which he had always grown the few vegetables he raised, he had long rows of almost everything in the vegetable line that was good, and he is growing them with less than half the work and trouble he formerly experienced. I consider a good garden-cultivator one of the most helpful tools one can have on the place. Plant the stuff so that it can be cultivated with the wheel-hoe, as it is often called, and one can plant four times as much as most people grow, and have a good supply all summer, instead of two or three little bites in the early spring.

SPRAY WITH CARE.—Not long ago I sprayed my currant-bushes with Paris green to kill the currant-worms. A few days later I found several little tree-sparrows dead under the bushes. No more poison goes on my currant-bushes. I will use kerosene emulsion. Just now I observed a little tree-sparrow hopping about one of the bushes, picking off stray worms.

All Over the Farm

SHALLOW TILLAGE

THE tendency in agricultural teaching is to run to extremes. When the fact was fully realized that moisture was the big factor in controlling the yields of crops in good soils, it was natural that the conservation of this moisture became the leading consideration, and too much has not been said about the value of an "earth-mulch." A crusted soil soon becomes dry, and the crop suffers for water. Frequent surface-tillage puts the ground into condition to retain its moisture. It was a mistake, however, to suppose that this tillage always should be so shallow that no plant-roots would be disturbed, and that the implement which stirred the surface to a depth of one to two inches was necessarily the right implement to use. The question is too big to be discussed adequately in this place, and yet we practical farmers, dependent for income upon the crops we are growing, need the actual truth.

IF THE CONSERVATION OF MOISTURE were the sole object of tillage very shallow cultivation would always be right. It is a principal object, and hence I favor it strongly, practising it much in my fields; but there are times when tillage is for other objects, and then it is that we must know enough to vary our methods. The roots of plants supply food to them, and under good soil-conditions we should leave the roots alone, but frequently it is best to sacrifice some of the roots because the soil is too compact or because the roots have formed too near the surface on account of excessively wet weather.

CONTROLLING ROOT-GROWTH.—In a wet spring plants develop roots close to the surface. One year ago, when the rainfall was excessive until late in June, the soil within one inch of the surface of the ground in the row was white with potato-roots. The plants were preparing to depend upon roots that would be worthless to them when serious drought came. The soil below was becoming heavy and close. It is the farmers' business to control this root-growth as well as possible, and tillage under such conditions as I have described should not be for the saving of moisture, but for the airing of the soil and the destruction of the plant-roots that had developed too near the surface. It did seem a serious matter to stir the soil rather deeply close to potato-plants eight inches high, but this stirring was needed. The ground was made loose, air could enter it, the plants were led to grow roots deeper in it, and when the drought came the crop did not suffer severely. We know that a dry June favors a corn crop partly because the plants root deeply. In a wet June we use deep tillage to secure the same result. In the case of a good cash crop, like potatoes, there is profit from the use of a hoe in the field if the surface-roots in the ridge cannot be destroyed in any other way. The compact soil must be made lively, and the plants must root deeply, if later drought is to be withstood after a season of moisture.

When a soil has been made loose before planting, and when the season is normal, we cultivate shallow to conserve moisture, and continued deep tillage is harmful; on the other hand, tillage may be needed to enliven a packed soil and to destroy surface-roots after excessive rains, putting the ground into condition for future surface-cultivations.

LIMING LAND

Lime was applied to the land in excessive amount for many years in portions of the East. Little or no fertilizer of any sort was used on limed land, and the day finally came when lime had little to work upon in the soil, and its effect ceased to be good. A resident of one of these sections enters into a long argument to show that lime should not be expected to accomplish much. For his own locality he is doubtless right, but all that he says weighs nothing against the successful experience of thousands who get good growths of clover after liming. The localities that used lime to great excess, depending upon it as a manure, are very limited in area when compared with the areas that have never used it at all. Where clover is failing outside the limestone sections it is found that a light dressing does much good to this fertilizing crop. It does not matter whether the lime acts as a plant-food, as an agent for improvement of the physical condition of the land, or as a "sweetener" of a sour soil, provided the clover is gotten. We know that clover is failing sadly in many places; and wherever a dressing of lime will secure clover, it does good, because clover is a substantial means of building up soil-fertility. Lime may not make a growth of clover on some land—its best benefit is to sour soils—but it is doing so on an area that increases every year; and where it does bring this renovating plant, the owners of the land see no room for argument as to its worth. Do not be afraid of lime so long as it is used to bring clover. The experience of those who used it for decades as a manure, failing to supply organic matter to their soils, has no value to the man who is using lime right.

THE POTATO ACREAGE

Our journals abound in advice that we do not plant an unusual acreage to potatoes. Possibly such advice may do good, but past experience shows that whenever there is a conviction that acreage will be restricted individuals begin to plan to enlarge their own area. Some years ago it was a safe guess that "dollar" seed would grow a low-priced crop, but conditions have changed. There is very little land now to which the potato is new, and on old land it is becoming more and more sensitive to adverse conditions. There is less vigor, less ability to withstand drought, because the soil does not retain moisture as well as formerly, and there are more disease-germs. The figures on acreage are not especially valuable in forecasting potato-prices. If the season were just right the normal acreage would give us more potatoes than the people would consume, and if there is a lot of heat and drought the crop would not equal the demand with a ten-per-cent increase in acreage. In other words, on account of the increasing sensitiveness of this crop, and moreover because it is not an export one, estimates based on acreage planted have far less value than similar estimates on staple grain crops.

The advice that we do not chase prices and plant more potatoes than usual is good chiefly for the reason that in successful farming we must have a reasonably stable plan. When we make abrupt changes some of the work is not done well, and we are losers thereby. If any farm product is high, it is so because many growers lost money trying to grow it, and failed; and the man who suddenly enlarges his acreage of that particular crop increases his chances of sharing in future failure. DAVID.

COVER-CROPS AND FERTILIZERS

Professor Roberts says: "Cover-crops may in a measure take the place of fertilizers and manures. They are not, however, a universal panacea for all soil-deficiencies, neither are they a full substitute in all cases for fertilizers. There is always a wide field for the profitable use of one or all of the concentrated forms of fertilizers named, and in many cases there is also a special place for the use of fertilizers, therefore the more need of honest goods. Commercial fertilizers furnish available plant-food, but no humus. The cover-crop furnishes both. It is only fair to say, however, that the plant-foods in the former are more available than in the latter. Cover-crops improve the physical condition of the soil, lessening the cost of tillage. Physically fertilizers benefit the soil little or none. The humus furnished by the cover-crops increases the availability of the plant-food already in the soil; fertilizers do not. Cover-crops shade the land and conserve moisture.

"It is impossible to accurately compare the cost of fertilizers with the cost of seeds for the cover-crops and the preparation of the soil for them. The cost of increasing productivity by extra tillage, by the use of fertilizers, by cover-crops, or by all three means, can only be determined in each case by the farmer interested. I give below a single illustration of what a cover-crop contains, knowing that another cover-crop under other conditions might either be more or less valuable. Second growth of clover furnished in roots and tops an acre the following: Nitrogen, 138.86 pounds; phosphoric acid, 87.85 pounds; potash, 109.90 pounds. There is removed by 25 bushels of wheat and accompanying straw, nitrogen, 43 pounds; phosphoric acid, 20 pounds, and potash, 27 pounds. It is believed that most of the nitrogen taken up by legumes is secured from the uncombined nitrogen in the atmosphere. The clover did not add to either the stores of phosphoric acid or potash. The plant took them from the soil and made them available."

KEEP UP THE SOIL-FERTILITY

Easier said than done? That is true of many things in life; but it is a fact that many of us are fast bringing our farms to a point where some one will need to work long and hard to bring back the fertility we are using up so recklessly. We have been going on just as if the land we possess were of unbounded resource. Year after year we have taken off and put little back—so little that we cannot now get the crops we once could. We admit it, and yet we keep right on. The man who comes after us must look out for himself? True; but suppose that man be our own flesh and blood? Do we want to leave him a heritage of never-ending struggle with a poor, worn-out farm? But whether he be our son or not, we should not be entirely forgetful of the future.

But how can we do it? What shall be our plan of keeping up the farm? In a dairy country there certainly is no better way than to keep cows enough to eat up all the stuff produced. If not cows, then sheep or young cattle. This method gives us plenty of manure to put back in the place of the hay and grain taken off. Sometimes it may be necessary to plow under a piece of clover or rye to help out. More than one man has found his best bank-account in the clover-field. I know of men who say they do not expect to do more than get the worth of their hay and rough fodder back from their farms in the form of milk and its products. If they do this they can keep up their farms, and that is a point of pride with them. But many do far better than this. For every dollar's worth of feed they get back two dollars for butter, milk or cheese.

With the great farms of the West the question is a more intricate one, and I am of the opinion that the day of the great wheat and corn fields is fast passing away. Necessity will compel men to do more general farming, so that they may have something to give back to their land beside now and then a stack of straw. Commercial fertilizers will not suffice. They are too expensive. When we remember that every crop of twenty-five bushels of wheat takes from the soil not less than eight dollars' worth of fertility an acre we can see what it would cost to maintain soil-fertility with commercial fertilizers.

The best policy for us to pursue, it seems to me, is to produce most of the grain we need on the farm, and feed everything out to stock of some kind that will return fertility to be given back to the land. If we do not begin this now, some one will be compelled to do it in the near future. I have heard of some men who were called cranks on the subject of soil-fertility. They are daft in a good cause. Would that we had more such men! E. L. VINCENT.

SECRET OF HEALTH

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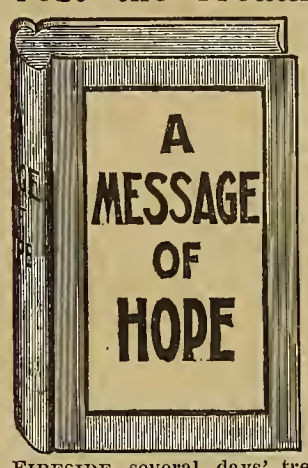

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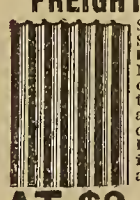
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In the Field

The average net profit an acre to the farmers of Michigan who grew beets for the sugar-factories in 1901 was fifteen dollars and forty cents.

THE CROP OUTLOOK

Basing its statements on reports received the last week in May "Bradstreet's" says: "As to the crop outlook generally it might be said that nearly every agricultural prospect pleases. This is in a measure true even of winter-wheat conditions, which have vastly improved over a month ago. Kansas advices are of a crop of forty million to fifty million bushels—a large decrease from last year, it is true, but better than was predicted some time ago. The spring-sown crops promise well. Corn-planting is not yet finished, but, as intimated in these columns some weeks ago, the acreage will be heavily increased. The same is true of oats and flax, the latter supplanting spring wheat to some extent in the Red River Valley, which has had an excess of rainfall this spring. Large fruit crops are indicated this year, and the same is true of vegetables, but the latter are backward on account of cold weather. High prices for tobacco, indicate that a heavy acreage will be planted, this being practically certain in Maryland and Kentucky. Early predictions of a decrease in the cotton area are being whittled down, and present prices certainly favor as large, if not a larger, area than a year ago. As to the condition of this crop no uncertainty exists, and prospects are concededly favorable in all states."

WEEDS IN PASTURES

The most common cause of weed-invasion of native pastures is overpasturing, whereby the wild grasses are kept down so that they cannot compete with the weeds. The latter being unpalatable usually are left undisturbed by the stock. Sometimes there are introduced weeds never found on the prairie, as ironweed, snow-on-the-mountain or milkweed, horseweed and thistle.

Prevention of weed-invasion of pastures is generally perfectly possible by grazing fewer head to the acre. Compare the number of weeds in a prairie pasture with those in an adjoining piece of similar land not grazed, but kept to be mowed for hay. What number of stock to the acre can be safely grazed depends on the region. In the "short-grass" country fifteen to twenty acres a head must be allowed. In central or eastern Kansas two and one half acres a head is perhaps a limit. Every farmer can tell by observation when weeds are coming in. If so, it is a sign to reduce the number of stock to the acre. No man can afford to raise stock in such numbers that they use up the capital itself (the land) by killing out the pasture-grasses which make it valuable.

Eradication of weeds already present in pastures depends on the particular case. Annual weeds can be killed out by mowing before seeding. This may have to be repeated several times during the growing-season, as many of them will send up new sprouts. In the case of biennials or perennials with tap-roots, cutting the latter under ground and beneath the "crown" is effective. Perennials like the bindweed, which spread by underground stems, are extremely difficult to deal with, because every bud on such a stem is capable of growing into a new plant. Plowing under simply spreads the plant by cutting the propagating-stems and scattering the pieces. No very satisfactory way of eradicating weeds of this kind can be given that will apply for all cases and conditions. A straw mulch, by excluding the light, will sometimes kill them. Common salt applied to the soil is effective, and arsenite of soda—one pound dissolved in eight quarts of cold water—is recommended. This can be obtained of wholesale druggists at ten cents a pound. Of course, any chemicals that will kill weeds will kill all the other vegetation for several months. Chemical methods of weed-extermination, then, should be used only as a last resort and under expert advice.

All bulk seed purchased should be carefully cleaned before sowing.—H. F. Roberts, in Bulletin of the Kansas Experiment Station.

IS MUCK EVER EQUAL TO COW-MANURE?

While we occasionally meet a farmer who answers "yes" to this, the great body of our practical farmers, while regarding muck as an excellent absorber of urine in the barn cellar, scout the idea of there being any reasonable ground for ranking it in itself with manure as plant-food. Well, brother farmers, let us spend a minute or two reasoning together, and see where a little common sense aided by a little help from science will land us on this question. In the first place, we know that there are many grades of muck, beginning with the sour, pasty, freshly dug article, on which starvation itself could not thrive, all the way up to the dry, fine kind, that has had a year of frost, rain and sunshine acting on it until it falls apart to the touch like an ash-heap. It is such muck as the latter we will compare with cow-manure. Now, cow-manure, like muck, differs greatly in quality, from that made by cows that have been fed on good English hay, with ten quarts of grain and gluten a day, down to that made by cows whose food is bog hay only. Let us stop a moment right here, and lay down three scientific truths as guide-posts to help us on our way toward the truth we are after—first, that the manure of any cow contains only such fertilizing elements as were contained in her food; second, that the quantity of these elements will be about four fifths of those contained in her food, the other fifth being used by the animal for milk and growth; and third, all the manure elements in the grasses are obtained solely from the soil in which they grow. With these three lamps to guide our feet we come unerringly to three conclusions—first, that the grass grown on mucky soil contains only such elements as are found in that soil; second, that manure made from that grass can contain only such fertilizing elements as the muck contained; and third, that as the cow used one fifth of these, her manure can contain but four fifths of them. Therefore the conclusion follows that while the manure contains the same fertilizing elements as the muck which grew the grass, it contains one fifth less of them; in other words, that muck is one fifth richer in plant-food than the manure from the grass that grew on it. Let us note that we have not proved that all kinds of muck are equal to any kind of cow-manure; neither that any kind of muck is equal to any kind of cow-manure, nor even that though muck must have the same element as the manure made from hay that grew upon it, that practically it is of the same value, for in muck as freshly dug these elements are inert—which means they are asleep—and to bring them to active life the acid in it needs to be neutralized, either by the addition of a caustic alkali, such as lime, or, what is better, unleached ashes, aided by the effects of sun and rain and that great pulverizer Jack Frost. The weak point of muck when in its best condition as plant-food is its deficiency in mineral elements, and its strong point is the large per cent of nitrogen that enters into its composition; these conditions point out the course of treatment needed when cropping muck-land, the wisdom of applying mineral matter directly in the form of gravelly soil up to one hundred loads to the acre, and the applying of unleached hardwood ashes and dissolved bone instead of barn-manure. A muck-bank is a dirty bank, but very clean dollars come out of it, and I have never known of one that failed to pay heavy dividends on every investment of intelligent labor made in it.—From the seed catalogue of James J. H. Gregory & Son.

Correspondence and Comment

From Missouri.—Platte County is one of the best in Missouri. The farms are fertile and well improved. Wheat yields from twenty to thirty-five bushels an acre; corn thirty to seventy-five. Fruits of all kinds are fine, especially the big red apple. Land is selling from thirty dollars to eighty-five dollars an acre.
Platte City, Platte County, Mo. L. M.

From California.—I came to this place from New York nearly eight years ago. Fruit-growing is the business here; nearly all kinds are grown, including oranges and lemons. The great ranches are being divided and sold in small lots to suit the purchaser. Land is selling at from twenty-five dollars to eighty dollars an acre. Orchards in full bearing will produce from one hundred dollars to five hundred dollars an acre, according to the variety and market price. One thousand dollars an acre is said to have been received last year for some pears.
Winters, Yolo County, Cal. E. B. R.

From Kentucky.—This is a good farming country, but the people do not seem to appreciate their advantages. We need some wide-awake Farm and Fireside farmers here. We are ten miles from Portsmouth, Ohio, where everything the farmers raise can be marketed at good prices. Most of the men here think they can do nothing but make cross-ties, and the girls go to Portsmouth to work in the shoe-factory; so they let farming drag. We have good schools and churches. Farmers with lots of pluck and energy could do well here. F. S.
Argentum, Greenup County, Ky.

From Alberta.—I have lived in the Saskatchewan Valley, Alberta, for the past ten years, and can say that the country is well adapted to general farming and stock-raising. Wheat yields from twenty-five to forty bushels to the acre; oats, from fifty to one hundred, and potatoes and all hardy vegetables yield remarkably well. Spring work begins about the middle of April; grain ripens the last of August, but September is the harvest month. Feed for stock is abundant. Cattle are usually fed from November until April, but horses frequently run out all winter. The land in this region is part prairie and part scrub and timber. The scrub land can be broken and cleared at a cost of from four to six dollars an acre. Improved land sells for seven dollars an acre upward. A. T. M.
Fort Saskatchewan, Alberta.

From Oklahoma.—I am a new subscriber to the Farm and Fireside, have read the May issues, and will say the paper is very interesting in its new dress. I enjoy reading everything in the paper, but I see nothing from our part of Oklahoma. We are in Beaver County, which is in the northwest corner. I have lived here since last fall only, so cannot tell you very much about the country. I think from what I hear that Kafir-corn is always a sure crop here. We have a fine garden; have radishes, onions and new potatoes to eat now. Sweet-potatoes are nearly always a sure crop here. Quite a lot of wheat was sown here last fall, and some of it looks well now; there has been hardly enough rainfall here for wheat, however. I enjoy reading the stories, and the fancy work patterns please me. A. W. F.
Ivanhoe, Beaver County, Okla.

From Washington.—Four years ago I came here with my family—four children and my wife—and one hundred and fifty dollars in cash. I bought a ranch of five acres with a fair house for four hundred and fifty dollars. I paid one hundred dollars down and gave a mortgage for three hundred and fifty dollars. The mortgage has been released, and I don't owe any one a dollar now. I dug a good well for thirty dollars, and built a new stable for one hundred and twenty dollars. I have two fine cows, one hundred hens, thirty Belgian hares, one acre of strawberries, one hundred and seventy-five fruit-trees. My two oldest girls go to school in Seattle. Butter is worth thirty cents a pound, eggs forty cents a dozen. There is a good market for everything. I have always had all the work I was able to do, and sometimes more. This is a fine climate.
Bellevue, King County, Wash. R. B.

From Michigan.—Our outlook now for wheat is the best in thirty years. Fruit prospects were never better than now. Timely rains have given meadows and pastures a start. It looks now as though 1902 will be as favorable as 1901 in grain and hay crops, and much more so in fruits. Last year gave us the best crops we have had in many years, except fruits. The potato crop broke all records in both quality and quantity. Farm-lands have declined in value for several years; but prices have touched bottom, are now a little better, and sales are more frequent. There are now great bargains in farms and farm-lands. In all new countries men that have done the hard work and made comfortable homes grow restless and sell out for less than the improvements are worth. The man who could not find a soil to suit him here probably could not anywhere.
Big Rapids, Mecosta County, Mich. H. C. P.

From Ohio—Prize Corn Culture.—My wife has long been a subscriber to the Farm and Fireside, while I take another agricultural paper. Looking over her paper my attention was called to your prize offer on one pound of field-corn. At that time I was engaged in plowing some ground that I thought would win the prize, and proposed to my wife that if she would renew I would send for the prize corn and divide the profits (?) with her. The terms were accepted. The corn was planted on the twentieth and was up on the twenty-sixth of May. I thought I would enter the contest to add a little variety to the monotony of corn-raising. When the time came for planting it occurred to me to write to one of my old pupils, as I was for many years superintendent of public schools. He had won a prize offered by a stock journal for the greatest yield on one acre of ground. He wrote me, in brief, his method of planting and culture and remarkable results, and offered to send me enough of his seed to plant an acre, which was gladly received. His method of planting follows: First he covered the soil with sixteen tons of green stable manure, drilled in four hundred pounds of suitable commercial fertilizer to the acre, and planted two grains in a hill two feet apart, the usual width of row. His soil is a muck mold; but he would recommend a more clayey soil, with seeds planted one foot apart. My soil was a mixture of clay and muck, which I had manured as he had done, so I concluded that I would use two hundred pounds to the acre, and put in with check-row planter and fertilized in the row. This method I concluded to use with your prize corn and also with my friend's prize-winner, and finally concluded to use the same fertilizers and also the same planting. I prepared my ground with cutaway and straight-toothed harrows, planted it May 20th, and to-day, May 26th, it is nearly one inch high, it having had a good drenching, warm rain in the meantime. I write you this note to let you know how much stimulus I obtained in my corn-planting from your prize offer. The end is not yet. G. N. C.
Springdale Farm, Oberlin, Ohio.

Fortune raps on every man's door but once. You will find your opportunity on the nineteenth page of this paper. A grand prize of $500.00 cash, and 206 other cash prizes, in the Dot Contest.

Gardening

By T. GREINER

THE PERENNIAL TREE OR WINTER ONION is undoubtedly the earliest green or bunching onion in existence. I find it needs good garden-soil to make large, early and tender green onions, and that it takes only a little spot of such soil to give a full supply to the family during April and May. There is no need of going without early sweet green onions for anybody having a few feet of ground available for the purpose. Plant the top sets in August. Usually there is also good call for these onion-stalks in our markets, and being grown with so little labor and so much certainty they are profitable.

THE NEW WHITE WINTER ONION.—My patch of the new "Hardy White Winter" onions grown from seed sown in open ground, like ordinary onions, last August has come on all right. The little seedlings wintered well, and after having a good hoeing both with the wheel-hoe and the common hand-hoe made good growth and gave me green bunching-onions long before I could get them from sets planted in early spring, although not so early as the Perennial Tree onion. They have a stronger flavor, however. The sweetest early green onions we can have come from Prizetaker sets, and this variety indeed is one of the best for sets to make a nice early bunching-onion.

WHEEL-HOE A NECESSITY.—I cannot conceive of any way I could find real comfort and enjoyment in even a small garden of one fourth of an acre or less without a wheel-hoe. I don't see how I could conscientiously ask a youngster of mine to help me hoe and weed in the garden if I were to refuse him the efficient help of the wheel-hoe. For a garden of one fourth of an acre or more in size I am sure that the garden-drill is also indispensable, and will add greatly to the enjoyment and to the real substantial benefits to be derived from the garden for all the members of the family. When the combination tool in advanced season is rigged for a double-wheel hoe, of course I use it mostly for straddling the rows, and in this way it does most excellent work in keeping the weeds down between the rows and close up to the plants. After the plants in the rows get large I usually rig up the machine for a single-wheel hoe, or as a cultivator, and go between the rows, keeping at a safe distance from the plants at each side. My advice, therefore, would be to get a combined drill and wheel-hoe.

THE HAND WHEEL-HOE.—E. M. D., of Olympia, Wash., asks me to name the most useful and handy wheel-hoe with which to work in a small garden (one fourth to one half an acre); also whether I prefer a single-wheel or a double-wheel hoe. There are a number of good wheel-hoes on the market, and I find that one person will take more kindly to one, and another person more kindly to another. The advantage of the one I use over most others is that it is easily adjusted from a single-wheel hoe to a double-wheel hoe, and vice versa, and from the single-wheel hoe to a garden-drill—that is, when you have the drill-parts. When thus converted into a drill, with marking-attachment, I often use it plainly and simply as a marker, and usually mark out my patches for setting onion plants and sets, beet-plants, etc. Indeed, I prefer to mark out the entire garden-patch in this way where close-planted vegetables are to be sown or planted. This leaves me free to use the garden-drill when sowing onion, beet, cabbage, carrot, kohlrabi, radish and similar seeds, following the marks previously made, rather than sowing one row and at the same time marking out the place for the next row. Thus I can give my undivided attention to the seed-sowing.

Fruit-Growing

By S. B. GREEN

RASPBERRY-CANE BORER.—A. M. R., Freeport, Pa. The black-raspberry canes received from you are infested with what is known as the raspberry-cane borer, which bores in the sap-wood just under the bark, girdling the cane and causing the swellings which you notice. The only remedy for it is to cut out the canes and burn them. This will probably result in lessening the injuries for next year. The burning should be done early this year.

TIME TO CUT BRUSH.—C. A. B., Wilton, N. H. The boxwood (by which I take it you mean one of the dogwoods) and almost all other plants may be most successfully killed by cutting off the sprouts when the work is done about the middle of June or from then on to the first of July. At this season of the year the plant-food which was stored up in the roots and top during the preceding year has become exhausted, and the plant has not yet stored up much food, so that it is dependent entirely upon its foliage for its nourishment. If the cutting is done close to the ground at this time the plants can sprout very little, if at all.

INJURED APPLE-TREES.—L. A., Dalbo, Minn. Young apple-trees which have had the bark gnawed off by rabbits should be treated in different ways, according to the extent of the injury. If the bark has been slightly gnawed only on one side, or to a small extent on both sides, but with uneven patches of bark, or if the under bark has not been gnawed off, they may be best treated by covering the injuries with grafting-wax or a coating of blue clay, and then wrapping with burlap. Where the injuries are close to the ground, as is often the case where the trees are gnawed by mice, then the wound should be treated as recommended, then covered with soil to the depth of perhaps three inches. If the trees are fully girdled the case is quite hopeless, for while they may be saved by putting in scions, and thus bridging over the gap, and while this method would be desirable in the case of large trees, yet with small trees it is not worth while.

FOREST-TREE SEEDLINGS.—H. D. C., Eminence, Kan. Hickory, beech, oak and walnut seed require about the same treatment for successful growth. The seed should be gathered in the autumn, mixed with sand or leaves, and left exposed to the frost outdoors. In the spring, as soon as the sprouts start, sow at once in drills. In the case of the white oak these directions would have to be modified, as the seed of this species starts in the autumn, and they must be planted as soon as gathered. In fact, under some conditions very good success can be obtained by planting any of these seeds in the autumn. They are so liable to be destroyed by rodents when thus planted, however, that most of our best nurserymen prefer to treat them as recommended. Where there is no difficulty of this sort I think autumn planting the best. The preparation of the ground for planting the seed is about the same as would be required for corn, and the seed should be sown quite thick, in drills four feet apart. Where it is desired to renew the growth in a grove it is a good plan to sow seeds in patches four feet square, where some of them may be allowed to remain, and the surplus transplanted.

Men, women, boys and girls, all have an equal opportunity to capture the grand prize of $500.00 cash, in the Dot Contest, on page 19 of this issue. 207 cash prizes are offered. Don't wait. Count now.

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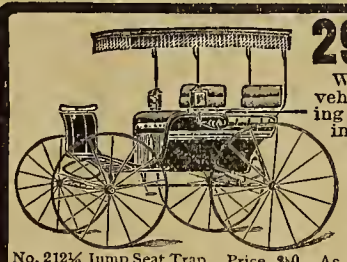

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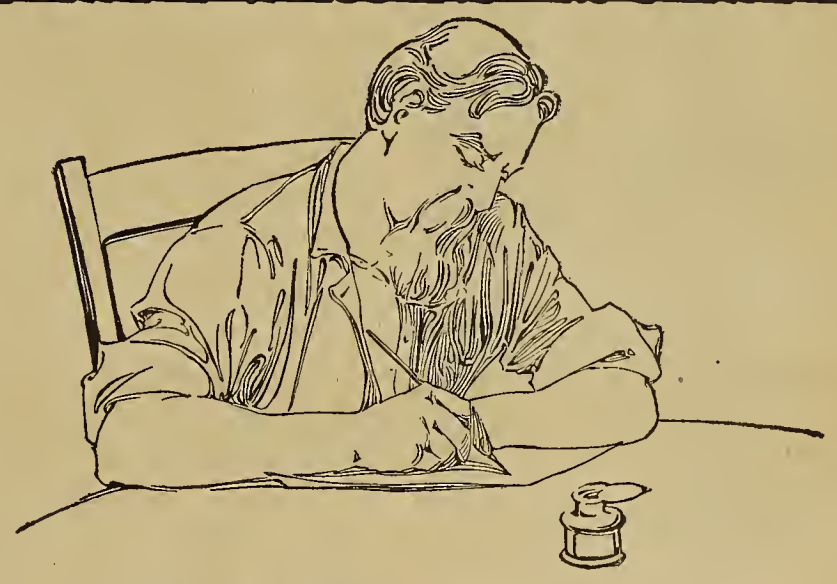

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Any one accepting this offer is also entitled to one free count in the Dot Contest on Page 19.

ADDRESS FARM AND FIRESIDE, SPRINGFIELD, OHIO

Live Stock and Dairy

SUGAR-BEETS FOR LAMBS

MR. H. G. WILKERSON, of Colorado, writes to the "A. W. and C. Reporter," that he has two hundred and sixty lambs about ready for market which will net him two dollars a head profit. He does not feed beet-pulp, but the whole beets, including the tops. He feeds each lamb in the morning three pounds of beets cut in half, and in the evening three fourths of a pound of shelled corn. With these two feeds a day the lambs require no hay, and will fatten in much less time than when fed exclusively on hay and corn.

KILLING LARGE ANIMALS

How to kill a horse crippled by accident or having passed the age of usefulness is often a serious question for sensitive people. The job is only too frequently done in a most bungling and inhuman manner. It is easy enough to kill an animal with one well-aimed and forcibly struck blow of the back of the ax directed to the middle of the forehead. Such a blow, however, usually fails to kill a horse instantaneously, and may cause to it a great deal of suffering. Last fall I was on the Pan-American Exposition grounds when the electrocution of Bostock's big and unmanageable elephant was to take place. I meant to learn something about the speedy and painless killing of a big brute by the electrical current, although I mistrusted from the very start that the much-advertised affair was to be only a fake, as it really proved to be in the end. Undoubtedly it would be easy enough for an expert electrician, with an unlimited supply of electrical power at his command, to extinguish the life of even a big animal suddenly, like blowing out a candle. But electrical experts and electrical power are not always available when a horse is to be killed. A bullet fired from a rifle or even a heavy revolver at close quarters, and right between the eyes, or possibly between eye and ear, will undoubtedly do cleaner business than the back of the ax; and if one fails several shots can be fired in rapid succession, making an end to the animal's suffering quickly and surely. Still more preferable in many cases may be the administration of a pound of chloroform. A large sponge saturated with the chloroform, placed into a tight sack or bag, and the latter slipped over the mouth and nostrils of the animal, and tied there, will accomplish the object sought in a few minutes.

FARMERS AS BUTTER-MAKERS

By far less of the butter made in this country at the present time is produced on the farm than formerly. With the coming of creameries the business of butter-making has been working more and more away from the farm and into the hands of men who make that art a profession.

This is partly for the better and partly for the worse. There are many on the farm who never should try to make up their own milk. They have neither the facilities nor the skill to do this in a first-class manner. Certain requisites must be at hand to enable the farmer to make butter successfully. Such are good, pure water, good pastures and good, warm barns. Not all of us have these. And whoever attempts to do without them cannot but make a failure. They might far better let the milk go to the creamery.

But it is a pity that some of the farmers who have given up making butter should have done so. Well-made dairy-butter is the finest in the world. It will keep longer, retaining its original flavor, than nine tenths of the creamery-butter on the market. There are thousands of city people now who prefer to buy their butter of farmers, and thousands more would be glad to do so if they could. But what advantage would that be to the farmer? It would mean a difference of from three to six cents on every pound made. If a man has twelve, fifteen or twenty cows, this means a fine addition to the yearly income. And most of us would find this a fine thing to reckon up at the end of the season's work.

The price of dairy-butter has been crowding up nearer and nearer every year to that commanded by creamery make. Take the quotations of March 22d for example of the near approach of figures. The New York quotations were as follows: Creamery, first, twenty-eight and twenty-nine cents; state dairy, twenty-eight cents. Why should not the price be the same? If the supply of state dairy were uniform that would be true. But some lots are not quite what they should be, and the price must be shaded. When the time comes that we as farmers make an article which is always up to the top notch, then the difference now marking the line between creamery and dairy butter will disappear.

There are many things to encourage private dairymen. There is a fine satisfaction in being master of one's own business. No one can dictate to the farmer what he shall or shall not do. He has his own reputation at stake, and will work to sustain it.

E. L. VINCENT.

PIG-PEN CHEMISTRY

Agricultural chemistry and adapted rations have produced marked changes in pork-making since the feeding-problems have been worked out on a scientific basis. The result in pig-feeding circles has been a shortening of the porker's span of life and a corresponding lengthening of the feeder's bank-account.

In the old days, when the fall-farrowed pigs were carried through the winter on the stinting-and-stunting plan, with the idea that a hog must be a year old or upward before turning off, are happily past. Now the maxim with progressive feeders is a short life and a growing one. Every day from start to finish that the best possible growth is not secured makes a leak in the profits. In fact, the pig's future in no small degree depends on the prenatal conditions. If his dam or sire is neglected, and becomes unfit by improper feeding, too close confinement or other common mistaken practices, the litter is handicapped from the start, and can never make the growth it otherwise would.

An average daily growth of three pounds in pig-feeding makes a good bull's-eye for the up-to-date feeder to aim at during the first six or eight months of the pig's life. When this, or even a gain considerably less than that figure, is attained a good margin of profit is assured.

A record of a litter raised by the writer may not be without interest and value. Nine pigs, farrowed early in March by a cross-bred Poland-China-Cheshire sow, sired by a Berkshire boar, were fed a few days under six months. The sire and dam had both descended from well-cared-for, growthy stock, had been given plenty of range, and were in good, but not fancy, condition. The pigs were left on the sow two months. At the time of weaning they were taking full rations of wheat middlings mixed with slightly soured skim-milk, besides eating heartily of clover in pasture. The same method of feeding was followed until the pigs were four months old, with the addition of some whole-wheat meal during the fourth month. During the fifth month a little Indian-corn meal was gradually added to the other feeds. During the sixth month more corn-meal was added until the grain ration was composed of middlings and corn-meal half and half combined with sufficient skim-milk to make a thick slop. Grain and milk were mixed in advance from one feeding-period to the next, three feeds daily, in just sufficient quantity to be greedily cleaned up. Comfortable, dry beds were provided, and no day in the six months of their lives were those pigs once off their feed. The last of August the pigs were marketed, when the litter showed an average weight of one hundred and seventy-one pounds each. At a fair estimate the skimmed milk consumed had a feeding value of thirty cents a hundred pounds.

B. F. W. T.

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has been to make nothing inferior or shoddy. They believed they could not afford to when they started and they know they can't now. For upwards of fifty years they have always put out the very best wagon they knew how to make. And they have always been a step in advance of the best anybody else could make. That is how the **Studebakers** got their good name and the colossal business they are doing to-day. **Studebaker's** wagons stand first everywhere and always

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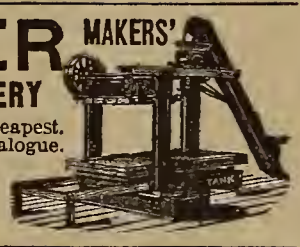

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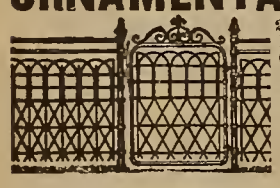

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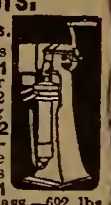

Official Report of State Authorities.
University of Wisconsin—630 lbs per hour; test skim milk...01
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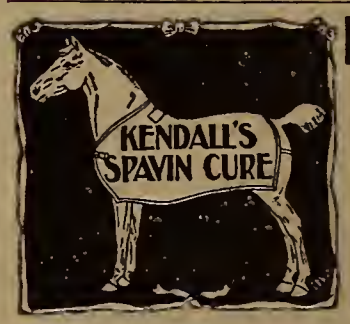

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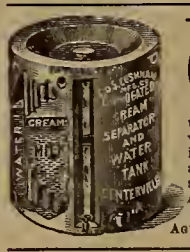

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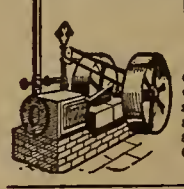

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$1,500.00 Cash Prizes
Free contest. See Pages 18 and 19 of this issue of the Farm and Fireside for list of 207 great cash prizes.

Live Stock and Dairy

OHIO SHORTHORN SALES

THE series of Shorthorn sales, consisting of E. S. Kelly's May 20th, C. L. Gerlaugh's May 21st, and W. I. Wood's May 22d, were the most successful held in Ohio in many years. Mr. Kelly had choice cattle to sell, his fine selection of imported stock attracting buyers from many different states. The stock was in fine condition when led into the ring, and in every case where individual merit and popular blood lines were combined there was no trouble to reach attractive prices. Mr. Gerlaugh's offerings was of the highest type of fashionably bred cattle, and bidding was spirited from start to finish. Mr. Wood included in his sale more cattle that did not carry imported blood, and were intended for the ordinary breeder, and while his average was not so high, the

MARY 14th

Sold for $1,000 May 20th, at the first annual public sale of choice animals from Mr. E. S. Kelly's Whitehall herd of Scotch-bred Shorthorns.

sale as a whole was fully satisfactory. These sales were a complete success, both from the sellers' and buyers' standpoint, and the good things dispersed went into hands that will appreciate what they got. These gentlemen are to be commended for the straightforward, manly way in which they conducted the sales. Every one who bought was guaranteed to get just what he bid on as to quality, breeding and condition. This series of sales has been worth more than can be estimated to the breeding interests of the various states into which the cattle went. Ohio, which was the pioneer state in Shorthorn importing and breeding, has again showed that she has not deserted her first love, and with such men as Kelly, Gerlaugh, Wood and others she is destined to hold her place in the front ranks.—National Stockman and Farmer.

At the Kelly sale prices ranged from $160 for a young bull to $1,625 for imported "Missie 148th."

Twenty-eight females sold for....	$19,185,	an average of $685.20
Eight bulls sold for.....	2,070,	an average of 228.75
Thirty-six head sold for.....	21,255,	an average of 590.40

At the Gerlaugh sale the prices ranged from $160 for a young heifer to $1,705 for "Master of the Ring," a roan bull out of a Missie cow.

Twenty-five females sold for.....	$15,375,	an average of $615.30
Eight bulls sold for.....	4,755,	an average of 594.70
Thirty-three head sold for.....	20,130,	an average of 610.00

At the Wood sale the prices ranged from $115 for a red heifer to $2,050 for the imported cow, "Proud Fancy."

Thirty-four females sold for.....	$12,485,	an average of $367.20
Ten bulls sold for.....	3,310,	an average of 331.10
Forty-four head sold for.....	15,795,	an average of 359.00

STABLE DISINFECTION

The disinfection of stables after a period of constant use should be a part of routine practice. Dairy-stables in particular should be disinfected twice a year, and oftener if the conditions demand it. It is not possible to give many stables the thorough disinfection that is possible in houses, because their construction will not admit of it, but it is possible to do very much and at little expense.

The ideal method of disinfection is by means of a gas, as that would have the power to penetrate everywhere. The effectiveness of this method depends upon securing a large volume of gas, and maintaining it for some time. Unless the stable can be made tight a gas will be of little use. For all practical purposes the gas produced by burning sulphur over a pot of coals is the best if used in connection with steam. The dry sulphur fumes have little germ-killing power, but when combined with the steam in the air it forms a compound that is deadly. The boiling of water and burning of sulphur should go together. Formaldehyde gas is not so efficient for the disinfection of a stable as many would have us believe. A very practical means of disinfection that may be used under almost every stable condition is by whitewashing. This is not expensive for material, and is very easily applied by means of an inexpensive spray-pump. The lime should be thoroughly slaked, strained through a cloth, and made just thin enough to work well through the nozzle. One man can apply two coats of whitewash with a pump and reach all parts of sides and ceiling of a room in about one fourth the time required with the brush. Whitewash will kill or hold the germs with which it comes in contact. It has the effect, too, of making the barn lighter and cleaner. After the first spraying one application will usually be sufficient if given regularly. As the business of supplying milk to cities and creameries is of large proportions, and depends upon cleanliness, this precaution of disinfection should be regularly followed.—A. W. Bitting, D.V.S., in Bulletin of the Indiana Experiment Station.

The recognized beef-breeds are the Shorthorns, Herefords and Aberdeen Angus. The breed that matures the earliest is the most profitable one. * * *

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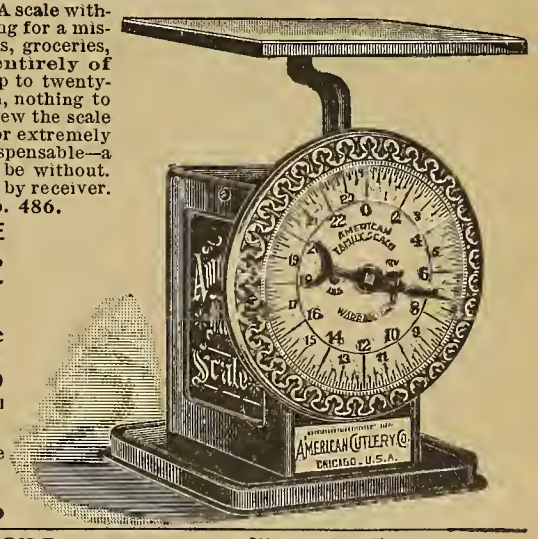

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Poultry-Raising

By P. H. JACOBS

THE HEN'S TOILET

THE dust-bath is to the fowl what the wash-tub is to the individual. With the dust-bath the hen cleans her body. She uses it also for exercise. When a hen is incubating she comes off as regularly to dust herself as to feed, instinct teaching her that it is the best of methods for ridding herself of lice. Dust is cheap, and should be used plentifully.

IMPROVEMENT

Select the choicest fowls to keep, and thus improve the flock every year. Marketing the best fowls and keeping those that are left, as many do, is like planting seed peas or beans from the vines that have supplied the table until they are no longer worth picking. The poultry-raiser and the stock-breeder should breed from the best specimens those that will give him the most profit for the outlay. In this manner the flock may be improved every year.

SHADELESS YARDS

As the warm weather approaches shade must be provided for the fowls and chicks if they are expected to thrive. Fowls suffer greatly from cold in winter, but not so much as they do from heat in summer if compelled to be under the sun's rays all the time. Farmers usually let their fowls run at large, and in that case they can always find plenty of shade; but in a shadeless yard, in which the fowls may be confined, they suffer greatly on very warm days.

FATTENING FOR MARKET

When fattening poultry for market the fowls will gain more rapidly if they are kept in small flocks than when they are cooped singly, as they then become droopy and lose their appetite. Feed them four times a day, allowing green food at least once a day, with plenty of corn at night. The other two meals may consist of one part, by weight, of corn-meal, one of bran, one of ground oats and one of crude tallow. Mix with boiling water or milk, and give as much as they will eat.

MAKING NEW BREEDS

The question has been asked if a breeder has a white bird (or birds) in his Barred Plymouth Rocks (or other breeds), how long will it be before he can create from them a flock that is all white? It depends on how much white appears. The more black, the longer the time required to get rid of it. It does not pay to bother with "sports," as it is easier to send and get White Plymouth Rocks at once. It is also a waste of time, as perhaps five or ten years may be required before all the black disappears, and after all the work has been done one will only have arrived at a point that could have been reached much easier through the breeders.

WASTE IN FEEDING

Care in feeding avoids waste of food. Frequently a large waste occurs when the food is thrown on the ground. The hens trample more than they eat, and then refuse it. This frequent and constant trampling of the food causes the ground to become contaminated, as well as rendering it a breeding-place for disease. There is no necessity for throwing the food on the ground to be wasted. A clean board is better, and in feeding one should endeavor to give no more than will be eaten up clean. Soft food is more easily wasted than whole grain, as the birds will hunt for that left over; and to avoid loss the soft food should not be too wet. Whole grains should be scattered over a large surface.

WHITEWASH MIXTURES

There are two kinds of ordinary whitewash which may be used to advantage. They are prepared in the following manner: For inside work, to a bucketful of ready lime-wash add one pint of soft-boiled rice and one fourth of a pound of white glue thoroughly dissolved, and mix through the mess. For outside work, substitute in place of the rice and glue (to each pailful of wash) one pound of common rock-salt dissolved in boiling water. Thus mixed, and applied on a bright, sunny day, the whitening will remain permanent in color, and will not readily rub off. The application for the interior will destroy the lice that may be secreted in the rough walls and crevices in the inside of the house if the wash be generously distributed.

TREATMENT FOR GAPES

Gapes occur where the soil is tainted or filthy. Chickens that are strong and vigorous resist parasitic attacks of this kind with great ease, while the fragile chickens succumb. The best preventive is to breed from the most vigorous parents possible, and to keep the chickens upon soil to which fowls have hitherto been strangers for some years. How the worm enters the system is not exactly understood, but there it is, and must be dealt with in the best manner possible. It often happens that remedies which are destructive to a parasite are dangerous to the chick. In the case of gapes many materials have been tried, with more or less success. The usual method is to submit the chicks to the fumes of burning sulphur. They must be kept in a small compartment, from which the gas cannot escape, sufficiently long to prevent any possibility of suffocation. Strong chicks can, without doubt, inhale the fumes long enough for the destruction of the parasite, but great care is necessary. A drop of turpentine on a bread-crumb is also a remedy. Thrusting a straw into the windpipe to draw the worms out cannot be easily done by inexperienced persons.

OATS AS FOOD

Oats contain more protein than corn, and less starch; but oats contain fully as much oil (or fat) as corn (about four per cent), but the proportion of oil is too small to render either grain fit for fowls. It is the starch in the corn that produces fat on an animal. Corn contains nearly sixty-three per cent of starch, and oats about forty-five per cent. Having more protein than corn, and less starch, oats are therefore better than corn for laying hens, if not fed exclusively. Another point in favor of oats is that the mineral matter and protein in oats places that grain ahead of corn for the layers, and the mineral matter supplies the lime for the shells. Protein is the muscle-producing material in foods. For fowls in the winter season a ration of both oats and corn ground together should give good results, and if bran is added the amount of protein and mineral matter will be further increased. Oats should not be fed exclusively, as the ration should be varied.

LIGHT BRAHMAS

Where a beginner has an inclosure, and desires a breed that will remain content under confinement, the Light Brahmas deserve consideration. They are hardy, are not as liable to disease as some breeds, and rank high as layers; but much depends on how they are managed. As they keep in a healthy condition, and usually have good appetites, they will eat until fully satisfied, and being of large size they will consume an enormous amount of food compared with the smaller breeds, if permitted to do so, but the owner must use judgment in feeding. They fatten very readily after the first year, and should not be supplied with as much as they desire. When given their liberty on a range they do not stray far away, as they are quiet in disposition. If fed judiciously they will equal any breed as layers; but no breed sooner becomes more unprofitable than Light Brahmas if they are given as much as they will eat, and are allowed to become indolent.

PREPARATIONS FOR SITTERS

Sitting-hens are persistent, and patiently endure disturbance, but they should be protected against natural enemies. The nest should be a fairly spacious box, with the bottom and one side taken off. The hen should be placed on the nest at night, and be carefully kept from the light for a day or two. With most hens it is best to feed them once a day—in the evening—for a while, until they are perfectly satisfied with the surroundings. A good nesting-box may be made with hinges at the top holding the wooden flap, that may be thus let down or raised at the pleasure of the owner. It should have a button, to fasten the flap down when the hen is on the nest. A small space should be cut out on the sides and in front, so as to give proper ventilation and comfort if the hen is entirely closed in. Insect-pests breed at such an extraordinary rate during warm weather that they will drive the hen from her nest a day or two before the chickens are due to hatch unless some precaution is taken to keep the nest clean and prevent attacks from pests of that kind.

DAMPNESS AND DUCKS

Dampness will cause lameness in ducks, though it is supposed by some that because ducks live to a great extent in the water, and are considerably hardier than ordinary fowls, they therefore do not require such careful housing or looking after; and although this is true to a certain degree, yet for that reason it does not do to neglect them or not to provide them with good houses—that is, if they are to prove at all profitable. Many people allow their ducks to wander about at will all day, sleep where they can at night, and pick up for themselves what food they can. This doubtless tends to make the birds very hardy; and although this is a very desirable characteristic to possess, it is not one of the most important. If we are to get the greatest number of eggs from ducks, and to realize the largest amount of profit, then we must look after them well, give them good houses in which to rest and also give a variety of food. Ducks will not thrive unless they have dry quarters at night. In summer they will thrive well on a good pasture.

FOWLS IN YARDS

Those who must confine their fowls should be careful in the selection of breeds. The large Asiatics —Brahmas, Cochins and Langshans—are heavy and cannot fly over fences, but are more content in confinement than some breeds. The mistake usually made in the keeping of poultry in yards is that of overfeeding them. Fowls should be fed only twice a day or they will become too fat and lazy, and fail to produce many eggs. The best way to get eggs from hens that are in confinement is to keep them at work scratching. When confined in yards the hens are liable to become addicted to feather-pulling and other vices due to idleness. If they become fat they should be fed only on lean meat for a week or more; after that a variety should be given, using but little grain during the warm season. An excellent mode to induce them to scratch is to throw a gill of millet-seed in cut straw, leaves or other litter, as they will work diligently for the small seeds. When hens lay double-yolk eggs, soft-shell eggs or very large eggs they are then in a very fat condition, and the food should be greatly reduced.

VARIETY IN FOODS

Hens that are expected to produce eggs must be fed foods that will assist in the work expected of them as producers. Bran, linseed-meal and scalded cut clover hay are more suitable for such than grain, and should be added to the ration. Corn is the cheapest of all foods for the formation of fat; but even in that case it gives the best results when the entire ration is of a varied character. In combining two materials, if you have one in excess, all the excess is left unappropriated. Add a little more of the material that is short, and the excess is at once taken up and used. It is just so in feeding fowls. An excess of either the nitrogenous or the carbonaceous material is a waste. Fed in the right proportion, all is used, while less food in quantity is required, because there is no waste. It is waste to feed entirely on meat, because it is too nitrogenous, and waste follows if you feed more than enough of the carbonaceous materials needed. The digestive organs are clogged by the excessive amount, and the whole system is put to an excessive strain in consequence. During the warm season, when allowed to forage for themselves, each fowl gathers several ounces of meat daily.

FOODS FOR FATTENING CHICKS

The fattening of chicks requires judgment. It is customary in Europe to mix with the food given to chicks proportions of eggs, milk, etc., also to introduce, for the formation of bone, certain quantities of phosphate of lime found in ground bone. In the early days flour is given, on account of the ease with which it is digested, grain being substituted as the birds get older. Wheat-flour is generally used. The grain given is wheat, rice, millet, buckwheat and corn, raw or cooked. Cooked potatoes are also given as a change of diet. The grain diet is varied as much as possible, and frequently administered mixed. The food ordinarily employed is made up of hard-boiled eggs and wheat-flour mixed in milk, a little water being added. To this is also added a small onion finely cut up, together with lettuce when other green food is scarce. The mixture is usually quite stiff, as moist food is considered harmful for the chicks. After the first few days a small quantity of whole grain is mixed into the paste, but if rapid development is desired the simple paste should be continued alone. In this country it is not customary to bestow much labor on a few chicks, but good results are had in fattening when corn-meal, milk, animal-meal and green food are allowed.

LEGHORNS.—B. G. G., Wytheville, Va., requests advice as to the difference in the laying qualities of the single-comb and rose-comb Leghorns. There is no difference whatever, except in the form of the combs, which does not affect their merits as layers.

INBREEDING OF TURKEYS.—J. G., Marietta, Ohio, wishes to know if a gobbler can be kept for another season, no new blood having been introduced for several years. It is always wise to avoid inbreeding. A gobbler should be produced from some other locality.

MILLET-SEED.—A. C. M., South Windham, Me., writes: "How much millet-seed is allowed each hen? Are there several kinds?" Millet-seed is not intended as a food, but simply to induce hens to scratch. A gill, if scattered, is sufficient for fifty hens. There are several kinds, but any kind will answer.

HENS VERY FAT.—N. M., Garden, N. D., desires to know what to do for hens that sneeze and gasp for breath, some dying in from one to three days. The hens are very fat. Such condition frequently exists in flocks that are heavily fed on grain. The only remedy is to reduce the feed and force the fowls to work for all that they receive. Turn them out, and give no food at all at this season.

CROSSING.—A. T. S., Carlisle, Pa., asks if White Plymouth Rocks cannot be improved in vigor by crossing with males of the Barred variety. Such a course would simply destroy a flock of White Plymouth Rocks, so far as uniformity is concerned, and result in the succeeding generations becoming scrubs, while nothing is gained by so doing. Procure new White Plymouth Rock males every year.

YOUNG CHICKS.—F. W. H., Santa Cruz, Cal., asks if sweet-corn is equal to field-corn for poultry; also the cause of incubator-chicks straddling out, and how old should chicks be for broilers. The sweet-corn contains a little more sugar than field-corn, but is otherwise excellent food. The cause of the straddling is probably due to too much bottom heat in the brooder. Chicks are usually sold as broilers when from nine to twelve weeks old, according to the growth and weight.

What is done can't be undone. Hard-boiled eggs, for instance.—Star of Hope.

The Grange

By MRS. MARY E. LEE

CURRENT COMMENT

Better not read at all, than read senseless trash.

Life is beautiful and serene or harsh and churlish as each individual determines.

Vices and ignoble passions stagnate and destroy. Beauty and purity are growth and life.

Professor Kern secured six hundred dollars for Winnebago County school-libraries by charging admission to graduating exercises and through boards of directors.

The longer I live, the more convinced am I that it is not so much the difference in opportunities of people as the use they make of them that conditions their success in life.

The only cure for the isolation of farm life is for neighbors to frequently meet together. Grange-workers can point out the way. They cannot carry you to the gatherings. Remember the adage about taking the horse to water.

I would like those who have not already done so, to read a few novels this summer. Hugo's "Les Miserables," Bulwer Lytton's "Last Days of Pompeii," Kingsley's "Hypatia," Holmes' "Elsie Venner," Thackeray's "Vanity Fair," Hawthorne's "Scarlet Letter," are all good ones.

ATTRACTIVE SCHOOL-GROUNDS

We are indebted to Prof. O. J. Kern, County Superintendent of Schools, for the accompanying illustration of an attractive school-yard. The trees were planted years ago by the patrons of the school. Stimulated by the splendid enthusiasm of Professor Kern, the directors and patrons of the school attended a directors' meeting March 6, 1901. Superintendent Bright, of Cook County, delivered an address, which was illustrated by stereopticon pictures. He was assisted by Assistant Superintendent Charles Farr. As a result the directors of this district during the spring vacation made internal and external improvements. A new fence was put up in front.

"How simple it is," writes Professor Kern. "Cedar posts, iron tubing and black and white paint, that is all, and yet how attractive it is! . . . Here is a prescription for other directors: 'Attend the next directors' meeting, and learn what it takes to make an attractive school house and grounds. Secure the necessary materials, such as lumber, paint, blackboard, trees, etc. Use these materials in season with common sense, and apply thoroughly until all signs of desolation disappear. Sure cure.'"

Professor Kern is a skilled organizer, and he has District School Improvement Societies in many districts. The schools in his county are becoming noted for their attractiveness and efficiency. He has enthusiasm, youth, thorough preparation for his duties, and he enthuses others. Would that every county in the United States had such a superintendent. If so, there would be very few children go from the schools unappreciative of the beautiful and artistic.

IMPROVED SCHOOL-YARD

Some day we will count it a matter for shame to have desolate, dreary, unattractive school-grounds. It costs so little to make them beautiful. Plant the trees wisely. God's sunlight and rain will tenderly nourish them. He who has not known the keen love for trees, nor felt their matchless tenderness, can never know what love and duty are. The absence of them about our schools is the key to the reason why our boys and girls do not go into the world with higher, holier ideals of duty to God and man. Make schools and homes beautiful, and beautiful souls will dwell therein.

THE BOXWELL LAW

What is known as the Boxwell Law is working a revolution in our rural schools. By its provisions any child who passes what is called the Boxwell examination is entitled to free tuition in his county high school. At the last session of the legislature high schools received a legal definition, and the State School Commissioner was instructed to prepare the questions and send to each body of examiners in the state. The County Board of Examiners for Teachers' Certificates conduct the Boxwell examinations.

In practically every rural district in the state are pupils bending every energy to secure the coveted certificate. Many who would otherwise never have given the faintest thought to a high-school course, under the suggestive influence of the law and the stimulus of their more ambitious school-fellows eagerly compete for the privilege. A Boxwell certificate carries with it as much eclat to the possessor as do the hard-earned laurels to the mature man or woman. It has raised the standard of scholarship and stimulated interest in our community as nothing else has done.

Our boys and girls attend the county-seat high school, which is twelve miles by rail from here. The railway company makes a uniform rate of fourteen cents a day (seventy cents a week). The children board at home. I think I never saw young people more eager to avail themselves of the superior advantages of a high school than ours. Indeed, the contest for honors is as great in an intellectual way as any that the athletic fields of our colleges have to offer.

How we older ones regret the passing of our school-days, with their meager opportunities.

NATIONAL EDUCATIONAL ASSOCIATION

The National Educational Association has, as is usual with this organization, a splendid program, covering a diversified field of educational endeavor. Of special interest to the farmer will be the following addresses: Hon. James Wilson, "The Education of the American Farmer;" Joseph Carter, Superintendent of Schools, Champaign, Ill., "Practical Value of Teaching Agriculture in the Public Schools;" J. W. Olsen, State Superintendent of Public Instruction, Minnesota, "Progress in Centralization of Rural Schools;" Miss Agnes Robertson, Cherokee, Iowa, "School-Libraries in the Rural Districts." Many others there are which are more or less intimately connected with the educational life as the farmer knows it.

This splendid organization, representing the best there is in education in our country, has done, is doing, and will yet do, more for the educational welfare of the little ones. Every citizen has a vital interest in its deliberations and recommendations. For forty years, with small beginnings, it has labored incessantly for the good of our schools. Its annual conventions are the Mecca of educators all over our land. Since 1884 the annual conventions have averaged more than six thousand members; since 1895 the average annual membership has been nearly ten thousand. It has a permanent invested fund of about one hundred thousand dollars, which yields an annual income of about four thousand dollars. Its officers serve without compensation.

Thus it will be seen that it is rendering service in the education from which you and I reap the benefits.

A NEGLECTED MEDIUM OF INFLUENCE

Whenever a body of farmers desire legislation on a certain measure they besiege representatives and senators for votes. If the measure is popular, candidates are pledged before votes are cast. But all interests have learned, to their sorrow, that anteëlection promises are not always productive of votes. This securing of pledges for meritorious measures is well enough, so far as it goes, but think ye a promise is of much worth in the face of the mandate of the central committeeman that the promised vote would lose support in a succeeding election?

A successful central committeeman controls the floating vote, and very often sets influences to work to mold the opinions of those who would scorn the idea of being "influenced." He knows each voter in his precinct or township better even than the individual knows himself. Has he any grudges to avenge, any knife to grind, political ambitions to satisfy, debts, mortgages or clubs to dodge, the committeeman knows it, and from the sum-total makes a pretty accurate forecast of the vote and the influences needed to control that vote. If he is shrewd and tactful he will not fall far short of his surmises. Obviously the opinion of such an official will carry more weight than the occasional letter of inquiry of a minority of the constituents. It is only when the measure carries the active support of influential men, or is supported by a large voting-class of "the dear people," that their clamors outweigh the protests of the committeeman.

The first attack ought to be to carry the election for a committeeman known to be upright and honorable, and then to stand stanchly by him through thick and thin. Failing to elect a desirable man, then the farmers must combine and work so aggressively for their measure as to render of as little effect as possible the efforts of their committeeman.

Perhaps you are "good" in arithmetic and can count with ability and patience. Why not try to have your name in the list of fortunate winners in the Dot Contest on page 19. $1,500.00 cash given in prizes, with a first grand prize of $500.00 cash. Don't neglect your opportunity to secure one of the 207 cash prizes.

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One of the most valuable features of the book is the manner in which it is indexed. **Any Subject is Instantly Found.** Although there are more than

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in this one volume, they are all so well arranged that any one can be found without the slightest delay, and without any time or effort wasted trying to find where to look for what you want to know, as is the case with most cyclopedias. From cover to cover every topic has its own place in one continuous alphabetical arrangement, making an absolutely perfect reference-book.

Examples of Subjects Under the word "Apple" there is first a brief discussion of the origin of the fruit. Then follow the uses of the apple in various countries; the value as a food; the different substances that go to make up the fruit; the diseases and insects that attack the fruit, and finally the value of the wood of the apple-tree.

As an illustration of the biographical features of the cyclopedia take the splendid, concise history found under the word "Washington." There is the complete story of the life and achievements of "The Father of His Country" from his birth, in 1732, down through his many years of service, both in the United States Army and later as President, ending finally with his death on December 14, 1799.

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ADDRESS

FARM AND FIRESIDE, Springfield, Ohio

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Dr. Coffee Restored My Sight says J. M. Davis.

J. M. DAVIS, Winterset Ia.

Mr. Davis had been afflicted with weak eyes for many years. They would get better and then worse, andfinally,ayearago, he was taken with a terrible inflammation of theeyes,ulcers formed and abscesses of each eyeball,which made him blind in 4 weeks; and having a neighbor who had been cured by Dr.Coffee, he went to him at once and in four months cured the ulcers, granulated lids and restored his sight.

Write Dr. Coffee for his 80-page Book explaining his "New Absorption System" and how you can cure Cataracts, Ulcers and all Eye diseases at home by mild medicine. Small expense. This book tells how he restored Davis' sight and hundreds of others at home. It contains photographs of how the eyes look when diseased and tells how to prevent blindness. Write quick. Specify Eye Book, it's free.

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NECK AND ARMS Instantly Removed Without Injury to the Most Delicate Skin.

In compounding an incomplete mixture was accidentally spilled on the back of the hand, and on washing afterward it was discovered that the hair was completely removed. We named the new discovery

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Apply for a few minutes and the hair disappears as if by magic. IT CANNOT FAIL. Modene supersedes electrolysis. Used by people of refinement, and recommended by all who have tested its merits. Modene sent by mail in safety mailing-cases on receipt of $1.00 per bottle. Postage-stamps taken. Address

MODENE MANUFACTURING CO., Dept. 20, Cincinnati, Ohio

WE OFFER $1,000 FOR FAILURE OR THE SLIGHTEST INJURY.

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I have berries, grapes and peaches a year old, fresh as when picked. I used the California Cold Process. Do not heat or seal the fruit, just put it up cold, keeps perfectly fresh, and costs almost nothing; can put up a bushel in ten minutes. Last year I sold directions to over 120 families in one week; any one will pay a dollar for directions when they see the beautiful samples of fruit. As there are many people poor like myself, I consider it my duty to give my experience to such, and feel confident any one can make one or two hundred dollars round home in a few days. I will mail sample of fruit and full directions to any of your readers for nineteen (19) two-cent stamps, which is only the actual cost of the samples, postage, etc. FRANCIS CASEY, St. Louis, Mo.

1902

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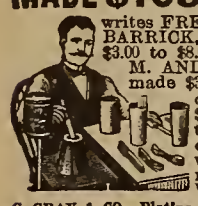
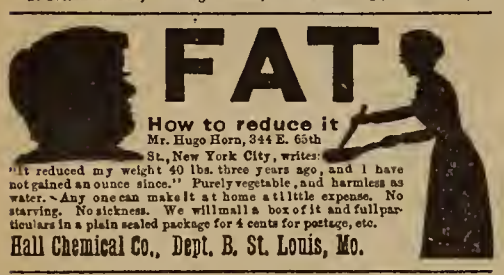


writes FRED. BLODGETT, of N.Y. J. L. BARRICK, of La., writes: "Am making $3.00 to $8.00 every day I work." MRS. L. M. ANDERSON, of Iowa, writes: "I made $3.80 to $6.50 a day." Hundreds doing likewise. So can you. $5.00 to $10.00 daily made plating jewelry, tableware, bicycles, metal goods with gold, silver, nickel, etc. Enormous demand. We teach you Write—offer free. **FREE.**

G. GRAY & CO., Plating Works, A Miami Bldg., Cincinnati, O.



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Rheumatism Cured, FREE!

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If afflicted with weak eyes, use **Thompson's Eye Water**

Around the Fireside

MORNING MUSIC

BY WILL CLARK

In the mornin', when you first get up,
  Before the sun has risen,
An' go out to feed your feathered flock,
  An' let 'em out o' prison;
An' your neighbor on the 'jinin' farm
  Is a-callin' o' his cattle,
An' over on the center road
  You can hear a wagin rattle.

An' the horses hear you at the crib,
  An' whinner in the stable;
An' the pigs set up a squeelin'
  As loud as they are able;
An' the cock a-flappin' o' his wings,
  An' crowin' like a major;
An' the hens a-singin' 'round him
  Like they done it on a wager.

An' the cow a-waitin' at the bars
  Till you come an' milk an' feed her;
An' the turkeys startin' for the field
  To try to catch a hopper,
An' wander through the woods all day
  To pick up their own livin',
An' get in shape for the roastin'-pan
  Along 'bout next Thanksgivin'.

I like a-putterin' 'round the barn
  At airly morn; no matter
If there ain't no one to talk to,
  You can hear the noise an' clatter
O' the live stock an' the poultry
  A-lowin' an' a-singin',
But as welcome sound as any
  Is the breakfast-bell a-ringin'.

STORIES AND LEGENDS OF STARS

BY FRANCES BENNETT CALLAWAY

When the sun sinks in that last splendid blaze which is so soon turned into the ashes of roses; when the evening shadows in somber livery darken the earth, what cheer it is that countless stars should twinkle forth their friendly lights, and shining down with calm and constant radiance illumine all the hours of night!

From these far-off silver balconies what thoughts and loves and fancies may not come fluttering down to us, as ours in turn ascend to them.

From time immemorial have legends been handed down to us about these splendid constellations, until they are strung from star to star like beaded rosaries, to be repeated over and over on those clear nights when moonlight and starlight make a shining way for our thoughts to climb to heaven.

The slender, shining crescent of the low-hung moon is the chariot from which Diana has just stepped; or grown to the full orb the moon herself is the "silver-footed queen" walking all night "through archways of bridged pearl and portals of pure silver."

Every school-boy knows the story of the "man in the moon" with his bundle of sticks. A man with a bundle on his back was traveling on Sunday when met by a fairy, who asked him why he worked on the Sabbath.

He replied, "Sunday on earth or Monday in heaven it is all one to me."

"Then carry your bundle forever," the fairy answered. "As you have no regard for Sunday on earth, take your perpetual Monday (Moonday) in heaven, and travel with the moon."

The Scandinavians picture in the moon two children bearing a pail of water suspended from a pole on their shoulders. This is thought to be the original of our Jack and Jill, the vanishing of one spot after the other as the moon wanes representing the fall first of Jack, and then of Jill.

A prettier fancy is that of seeing the Madonna in the moon, her dark hair flying and the babe pressed to her bosom.

One writer brightly conjectures the moon to be a receptacle in which all useless cares may be deposited. What a pleasurable world this would be in which to live if our good fairies would go around daily gathering up all the rubbish of petty anxieties, frets, superstitions and worries, and throw them into the moon.

One of our most splendid constellations is Orion, the giant hunter, "begirt with many a blazing star." The poet pictures him with his sword gleaming by his side, and the lion's hide on his arm scattering its radiance through the midnight air. His story is this: Apollo, being angry with him, caused the Scorpion to sting him; but at the intercession of Diana, who loved Orion, he was placed in the sky opposite the Scorpion, so that when the reptile lifted its head in the east Orion could fly down the west.

"When the Scorpion comes
  Orion flies to the end of earth."

The three bright stars in the belt are popularly known as the Magi, or the three wise men from the Orient, and also as the three Marys.

Doubtless the most familiar skymark on a clear night of stars is the Great Bear. Why it should have been known in all ages and by all peoples as a bear is unaccountable when we consider that it has a long tail and in no way resembles that animal. The story is that the beautiful Callisto was changed into a bear by Zeus to conceal her from the jealous Hera. Wandering in this sad plight through the woods, she met her own son Ares, and was about to embrace him, when he raised his spear to strike her. Jupiter, however, took pity on them, and prevented the crime by snatching both to the sky, where they became the Great Bear and the Little Bear.

The constellations are also familiarly known as the Great Dipper and the Little Dipper. The pole-star around which the Little Dipper swings is the most familiar of all the stars, from its apparent fixity.

Passing from the west of Cassiopeia's Chair on one side of the pole-star to the Great Dipper on the other we will discern the Hyades and Pleiades in that notable constellation of Taurus the Bull. The Hyades were daughters of Atlas, and together with their half-sisters, the Pleiades, were called Atlantides. The word "Hyades," meaning rain, is attributed to their reputed influence on the weather. In the showery springtime they set just after the sun, and in the stormy fall just before sunrise. Aldebaran, the bright star in the Hyades, signifies "hindmost" because it follows, or drives, the Pleiades.

The Pleiades lie upon the neck of the Bull, where Bayard Taylor likens them to golden bees upon its mane, or as Tennyson sees them like fireflies:

Many a night I saw Pleiads, rising thro' the mellow shade,
Glitter like a swarm of fireflies tangled in a silver braid.

In popular folk-lore they have been called "the hen and her chickens," Alcyone being "the golden cluck-hen," though sometimes this star is a girl feeding the brood. A favorite oriental fancy called the Pleiades a necklace of brilliant gems, and this may have been the thought of the sacred writer of the Book of Job in the passage, "Canst thou bind the sweet influences of Pleiades, or loose the bands of Orion?"

Some have surmised that Alcyone, this golden cluck-hen of the Pleiades, might be the central sun of the whole stellar universe. This view, however, has not been proven. We do know that the Pleiades constitute a connected system, the grandeur of which exceeds our comprehension, and that a ray of light which could cross our solar system in a few hours could not for several years fly from the boundary to boundary of this miniature universe of suns.

One cannot look at the starry heavens without traveling in fancy the Milky Way.

"A broad and ample road whose dust is gold,
  And pavement stars, as stars to thee appear,
  Seen in the galaxy, that milky way."

The old Greeks believed that the gods built their palaces along this glittering road, and almost universally it has been the path by which departing souls reach their heavenly home.

Broad pathway of star-dust winding past shining palaces and bewildering, shimmering gardens is a beautiful fancy, but the reality of worlds heaped on worlds and suns circling in clustering profusion beyond suns is far more grand. The heart cannot imagine what our Heavenly Father has prepared for us in those far-away mansions, but our faith is mightily strengthened by these nightly visions of jeweled foundation and gates of pearl.

GARDEN BOOKS

Modern light literature has reflected the growing love for gardens. During the past year or so there has been almost a deluge of books treating directly or indirectly on the garden. Charles Dudley Warner's delightful little volume, "My Summer in a Garden," seems to have been quite forgotten because of these new-comers, though few have as much grace and charm, and it is passing strange that his publishers have not brought out a new and embellished edition. Thoreau, too, is overlooked, though "Elizabeth and her German Garden," with its more modern touch, had a large vogue, as did "A Solitary Summer," by the same piquant and witty writer. Three sumptuous volumes descriptive of the great English estates published within a year or so are the "Famous Homes of Great Britain" series. A somewhat similar one in sumptuous form, though treating exclusively of grounds rather than of mansions, is "Gardens Old and New."

Another English book popular here, though limited in scope, is "Wall and Water Gardens," describing the treatment of these kinds. A practical handbook for amateur gardeners is "The Handbook of Gardening," illustrated and written by experts. Of historic interest is Mrs. Alice Morse Earl's "Old-Time Gardens," describing historic gardens in America. The anonymously written "Garden of a Commuter's Wife" is a delightful little record of personal experiences in a New York suburb. "Content in a Garden;" "The Amateur's Practical Garden Book," by Hunn and Baily; F. Schuyler Mathews' "Familiar Flowers of Field and Garden;" Arnott's "The Book of Bulbs;" Harriet L. Keeler's "Our Native Trees;" Mathews' "Familiar Trees and Their Leaves;" Parsons' "How to Know the Fern;" "Bird Neighbors;" "The Butterfly Book," and the numerous "How to Know" books, describing birds and flowers, fields and meadows, and all kindred phases of Nature, are now to be had in illustrated and most artistic form. Surely the modern garden-maker need lack no guides so far as the printed page is concerned. Almost every possible phase of gardening and all subjects remotely connected with it are exploited by modern writers and publishers. S.

The Housewife

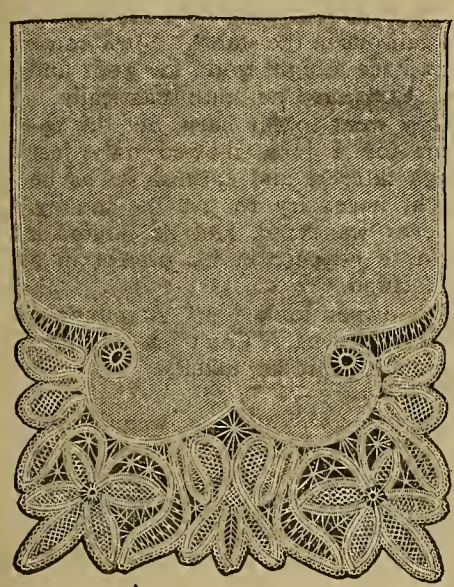
SUGGESTIVE SYMPTOMS

NATURE has been wonderfully kind in displaying danger-signals along Life's railway, and it would be well for us to heed them.

If one has the headache he knows that something is wrong not merely with that organ, but with the stomach and digestive organs. A headache-powder may relieve the pain, but it does not remove the cause of the sickness. One should seek for the cause and permanent remedy rather than for temporary relief. Surcease from pain is not the only thing to be sought. To prevent disease is better than to cure it.

We are traveling in a train; the door opens, and a cinder is blown into the eye. We would probably not be aware of the fact did not Nature inform us, by causing the pain, and then sending the tears to wash out the offending mote.

Children eat too much green fruit in the spring. Again Nature comes to the rescue. She tells them, in unmistakable tones, that they have taken indigestible things into their delicate stomachs, and that they must throw them out or suffer the consequences. So forcible are her tones that the wise children remember, and do not repeat the offense.



POINT-LACE TIE

Hundreds of women are dying—some rapidly, others slowly—from the pressure of corsets upon the solar plexus and other sensitive organs. They say they do not wear their clothing tight, and yet—they do. There can neither be health, beauty nor comfort for women who compress their vital organs, and Nature—vainly in some cases—tries to tell them so. She brings to them nervousness and weaknesses, that they may see the results of such a course, and cease to follow it.

Nature knows that we all desire beauty, and does her best to bestow it upon each of us, but she knows that beauty and ill health cannot often go hand in hand. She tells us to dress comfortably; to eat healthful food, but not too much of it; to breath deeply; to walk briskly in the open air; to preserve regular habits; to "keep sweet;" to eschew bitterness and jealousies—in fact, to live naturally.

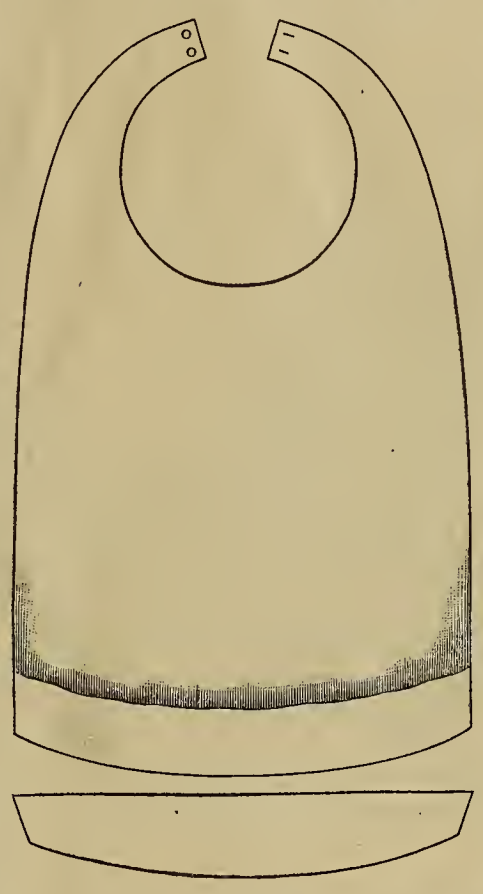
"Errors in diet and dress, poor ventilation, overfatigue, lack of exercise, overexertion—these are the underlying causes of all disease." So we see that disease comes because some of the simple laws of health have been violated. If contagious diseases come to us, that is perhaps another side of the question.

If I am not eating the proper food, or if it is prepared in a manner that makes it too rich and indigestible; if I drink too strong tea and coffee; if I do not dress according to the laws of health, I must correct these things before I expect Nature to stop throwing out the danger-signal. If I sleep, or try to, in a poorly ventilated room; if I remain indoors with neither doors nor windows open, I need not be surprised that the lungs refuse to do the work that is expected of them. If I persist in going on when Nature tells me to stop; if I refuse to rest so long as I can move hand or foot, she will see to it that I am not able to move the carpals or the tarsals until I have taken the long-needed rest. If I will not exercise and use my muscles, she will punish me by telegraphing to my nerves to be supersensitive, or she will tell my stomach that it may utterly refuse to do its work of digestion and assimilation until I get up and out and take exercise in the pure air if possible.

We generally do everything by extremes in this age; if we rest, we do too much of it. We often need change of occupation rather than absolute nondoing. If we work, however, ninety-nine times out of one hundred we work too hard. Even metals, they say, become weary.

E. B. SIMMONS.

CHILD'S EATING-BIB



This bib is something entirely new, as it has a shallow pocket in which to catch the crumbs. The original was made from white oil-cloth, bound with white tape, and had tiny bunches of forget-me-nots painted upon it with oil-colors. After each meal the crumbs can be shaken from the pocket, and the surface wiped with a damp cloth. The diagram shows how to form the bib and the pocket, and any one can easily cut it out. Very pretty bibs for company wear can be made of heavy white linen or toweling, and embroidered with wash-silks.

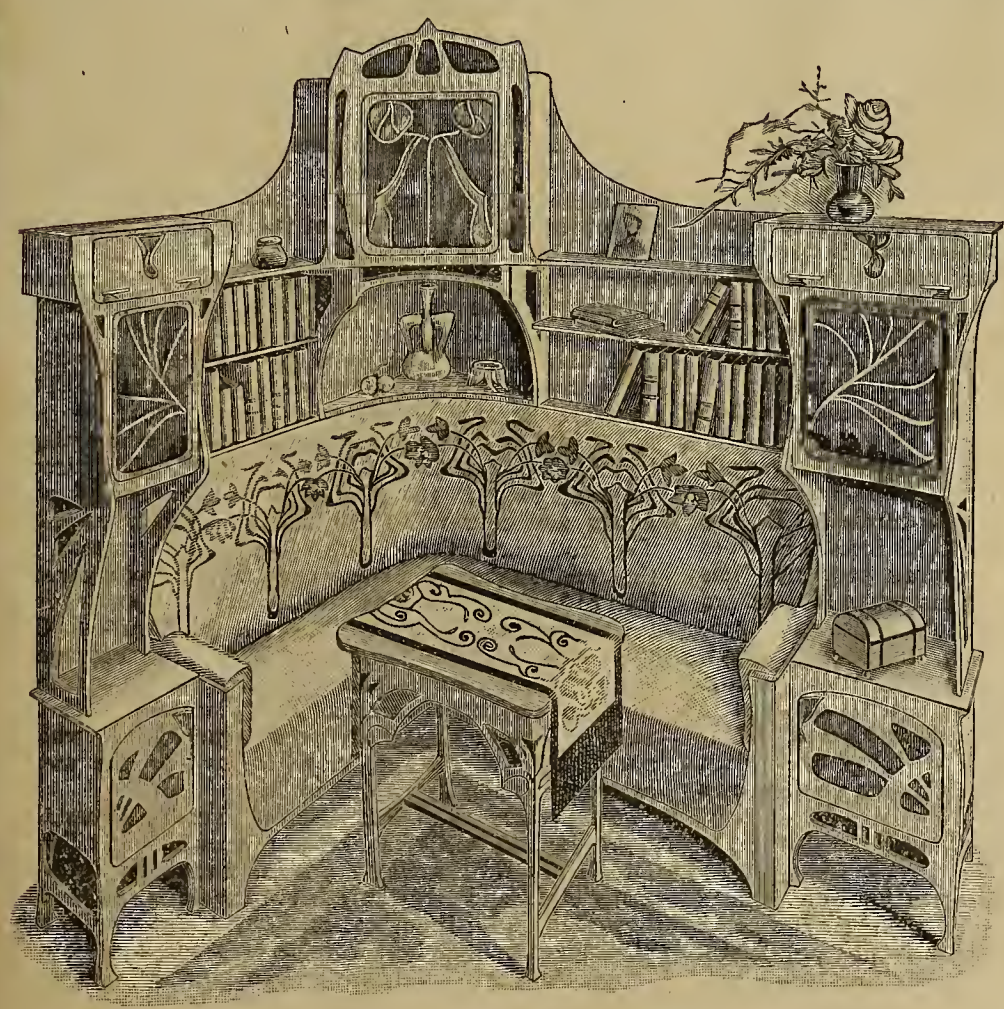
MAY LONARD.

RECEIPTS FOR PEACH PICKLES

SWEET PICKLES.—Select well-shaped, half-ripe cling peaches, and neatly pare. For ten pounds of fruit weigh out five pounds of sugar, and sprinkle in layers between the peaches. When the sugar has dissolved, which will be in about an hour, put the syrup thus formed into a porcelain kettle, with one cupful of strong vinegar. When it boils drop in the fruit, and cook for ten minutes, then dip out into jars. Add to the syrup in the kettle three pints of vinegar, one tablespoonful of mace, two tablespoonfuls of allspice and two tablespoonfuls of cinnamon. When this has boiled until it thickens pour it over the fruit, and seal.

SWEET PICKLES No. 2.—Make a brine strong enough to bear an egg. When the salt is dissolved put in large cling peaches without paring them. At the end of three days take them out, carefully wipe off the fuzz with a cloth, and lay in a colander to drain for several hours. When they are dry put them into a stone jar. For every gallon of fruit allow one quart of strong vinegar, four teacupfuls of brown sugar, two tablespoonfuls of turmeric, two tablespoonfuls of cinnamon and two tablespoonfuls of allspice. Boil the vinegar, spices and sugar together, and pour over the fruit, filling the jar with plain boiled vinegar. Seal immediately.

MRS. W. L. TABOR.

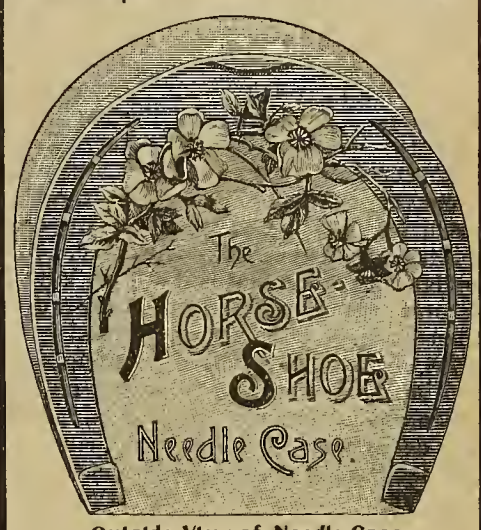


SUGGESTION FOR A COZY-CORNER

In every sitting-room there is a corner by the fireplace or window that can be utilized as a key-note for the whole room. If this is too elaborate it can be much simpler, but still be decorative. Always use a plain color—either deep red or green—for the upholstering. The wood parts may be of plain pine stained green or red. If one's husband or brother is handy with tools, a corner like the illustration can soon be modeled. The boxes can have hinged seats, so that the inside may be used as receptacles for clothing.

To fully enjoy the comfort and rest which should follow the spring house-cleaning, you should renew and brighten your rooms with some of those fine engravings offered on page 18. And at the same time you will be entitled to take part in the Dot Counting contest free.

FREE
Decorated
Needle-Case
With Complete Assortment of Fine Needles



Outside View of Needle-Case
Very much reduced in size.

Every woman will appreciate this useful and handsome article. The case is

Handsomely Decorated in Colors

Its general shape is that of a horseshoe, hinged at the base of the shoe. The back also has a design in colors. Open this case measures 9 inches long by 4¼ inches wide.

On one side there are four needle-pockets, containing sizes 3, 5, 6, 7 and 9 of the finest imported needles. On the other side is an assortment of fifteen fancy needles, including a square-end bodkin 2¾ inches long, two large darning-needles, each about two inches long, and twelve fancy large and small eyed needles. All of these needles are

Sharp's Best Ellipse Silver-Eyed

The eye is so shaped as to be threaded with the greatest ease; has no sharp edge to cut the thread. Another valuable feature is a groove-shape given to the end of each needle at the eye, so that the thread will follow the needle through any cloth, heavy or light, without the slightest strain. Order as No. 122.

This Needle-Case FREE

1 We will send this Needle-Case FREE, postpaid, for sending one yearly subscription, new or renewal, to the Farm and Fireside; or

2 We will send the Farm and Fireside one year, new or renewal, and this complete Needle-Case for 35 Cents

(When this offer is accepted no cash commission can be allowed and the name cannot count in a club toward a premium)

Any one accepting this offer is entitled to a free count in the Dot Contest. See Page 19.

Address FARM AND FIRESIDE, Springfield, Ohio

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We bought at Receiver's Sale 20,000 rolls "Engle" Brand Roofing. Made of two sheets saturated felt, between sheets waterproof cement making a solid, flexible sheet, it can be put on without removing the old roof. Can be applied without previous experience, requiring no special tools. Each roll contains 108 square feet. Price complete with cement for two coats, caps and nails to lay, per roll, $1.05. Also a few rolls, 3 ply, per roll, $1.25. Ask for Catalogue No. 84.

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Makes pure soap without boiling.

$1,500.00 Cash for counting dots

See Pages 18 and 19 of this issue of the Farm and Fireside. YOU can enter this contest. 207 cash prizes.

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If afflicted with weak eyes, use Thompson's Eye Water

Peaches in Southeastern Ohio

By MARY E. LEE

When J. R. Freiner, a lumberman from Michigan, came to Zaleski, and bought woodland after woodland, he was welcomed alike by farmers and business men. The farmers found in him a good judge of what a tree was worth, and ready to pay the price; the business men found in him a shrewd, sagacious, public-spirited citizen.

When he announced that he was going to clear up a few hundred acres of land and plant peaches the wise ones wagged their heads and prophesied dire failure. "Brush will grow faster than his trees." "No farmer ever made more than a bare living here." "All the wealth in this country is underground." Despite these prophecies Mr. Freiner had faith in his ability to make the orchards pay. Zaleski had formerly been an industrial center. But coal-mining had become unprofitable, the railway-shop had been removed, and a straggling population of discouraged, hopeless employees was stranded. Here was an abundance of labor that had not yet left the town. Many others would return if a chance for employment was given.

Mr. Freiner, in addition to being a good business man, is a practical philanthropist. "As many of these people really desire work, I will employ them," he said. He put men to work clearing up the land. This was thoroughly done. It was then plowed and prepared for the fruit-trees. There are two farms, embracing in all four hundred and two acres. Here he planted thirty-five thousand trees, principally Elbertas. The other varieties are Fox Seedling, Beer's Smock, Late Crawford, Mountain Rose, Chair's Choice, Gary's Hold-on, Billean's Late, Reeves' Favorite, Stump the World Wonderful, Mixon Free, Heath Cling. The trees grew. The weeds and brush tried to, but under the constant cultivation they gave up the unequal struggle. The work was skilfully directed.

The cost was thus reduced to a minimum. Men who have cleared up new land know the constant fight that must be waged. Much of the work must be done by hand. The most of this work came in during the financial depression, and laborers were many. The orchard bore but a small crop of fruit in 1900. The prophets of evil had their innings. If Mr. Freiner had any doubts or misgivings he kept them to himself, and kept plows and harrows going. The trees were carefully pruned. The year 1901 was a record-breaker for peaches. Again the prophets of ill predicted loss. "He has a magnificent crop," said they, "but so has every one else." But "every one else" had not given to their orchards such generous attention. Seeing that the crop would be enormous, Mr. Freiner had his men thin the fruit, in May and June, to six inches apart. Six weeks of time and eighteen hundred dollars were consumed in this and in propping the trees. The work was done by hand and by knocking off the peaches with clubs. Even then the trees were too heavily laden.

That section experienced the most fearful drought ever known. For twenty-nine days in July there was not a drop of rain. During the entire season there were but two or three soaking rains. From July to the middle of December water never flowed in many streams. Nevertheless the early fruit was superior to that grown in most orchards, and found a ready market. The late fruit was large, beautifully tinted and colored, and of superior quality.

The entire crop of more than one hundred thousand bushels was sold to J. Marshall Barry, of Maryland, one of the largest strawberry and peach shippers in the country. The idle car-shop buildings were admirably adapted to his needs. They were large, well lighted, and a railway-track extended through them. It was in these dismantled buildings that the splendid enterprise had its culmination.

The peaches were shipped East, and to Wisconsin and Michigan, to houses connected with Mr. Barry. With his wide opportunities and thirty years' experience in handling fruit Mr. Barry was able to avoid the glutted markets, and ship to points where there was a scarcity. Refrigerator-cars were used. The packages were Delaware half-bushel baskets and Georgia carriers.

It was an interesting sight to see wagon-load after wagon-load of peaches brought to the building, quickly unloaded, run through the graders, and carried to the packers. The workers were under excellent control, and there was no interference or waiting. The finest peaches were packed by hand, in the Georgia carriers, by deft-fingered girls. Each carrier held twelve peaches, and these were separated by cardboard partitions. The upper peaches in many instances were polished. This was done by means of a few swift strokes with a soft whisk-broom. They were pleasing to the eye, and surely tempting to the fancy trade, for which they were prepared.

We asked Mr. Barry if it paid to give so much care to the peaches when there was such a large crop.

"Yes," said he; "peaches are so common that to attract the fancy trade they must instantly attract the eye."

He considered care in packing of even more importance when there was abundance than when scarcity made any peach taste good. The remainder of the peaches were packed in half-bushel baskets and loaded in the cars, eight hundred baskets to the car. Sixty girls were employed as packers, at seventy-five cents a day; one hundred and thirty-five teamsters, pickers and packers, at one dollar and twenty-five cents a day.

"Where do you get the ice for refrigerating the cars?" we asked Mr. Barry.

"We put up our own ice every winter, at Toledo, Ohio."

"How much?"

"Oh, about one hundred and eighty thousand tons."

"How much does it take to a car?"

THINNING THE FRUIT

"It takes about ten thousand pounds to refrigerate a car—six thousand pounds before it starts, and four thousand pounds every twenty-four hours."

The peach crop netted Mr. Freiner between twenty-five thousand dollars and twenty-six thousand dollars. It was estimated that he would pay out about twenty-five dollars a day for two months after the crop was harvested—in pruning, cleaning the orchard and getting ready for the next year's crop. He will plant ten thousand more Elbertas, and expects to plant his own seed and raise his own trees.

The orchard also contains about five hundred plum-trees and one thousand apple-trees. There are two acres in strawberries. The Marshall, Brandywine and Gandy are the leading crops. Forty-five girls and women were employed this year as pickers, at one cent a quart.

Associated with Mr. Freiner are the Messrs. Ernest and Phil Fischer, energetic young business men, who give much of their time to departments of this work. This enterprise is all the more remarkable because the soil is thin. Farmers have for years made but a scant living, yet this man has given employment to about two hundred men and women, has made a profit out of his first crop, and has a good orchard in excellent shape for future profits. There are many farmers with one fourth the amount of land who consider themselves fortunate if they can get enough from year to year to pay taxes and interest. It is only another illustration of the rule that it is the man, not the location, that conditions success.

We asked Mr. Barry why the small farmer was not more successful with his orchard. He was very emphatic in his reply. "Because he is careless. He will not give the necessary attention to his trees. He does not cultivate, thin, prune, or spray properly. His methods are slipshod. No man can make his orchard pay unless he gives it good cultivation, uses the pruning-shears with good judgment, thins and sprays. Then, too, the small farmers must coöperate in selling. If they have more than the local market can handle they must ship to reliable commission-men. Their product must be honestly packed. They must plant their own seed, raise their own trees, and do their own grafting."

"Will they ever do all these things?"

"Never."

Athens County has won renown for other things than politics and politicians. Possibly her peaches possess a more savory flavor than her politicians. Certain it is that her highest-priced peaches and politicians do not grow on the same soil. The peach propaganda began about twelve years ago. The principal money crop—sheep and wool—ceased to yield a good revenue. Peach enthusiasts found receptive listeners. Millions of trees were planted upon thousands of acres of hills. It is safe to say that no one crop brought to the farmers in any series of years such handsome financial returns. The hills seemed peculiarly adapted to the production of high-colored, large, luscious peaches. Many more orchards will be planted on farms best adapted to them. On many other farms, especially in the limestone sections where the peach has held sway, farmers are going back to their first love—Merino sheep, fine horses and the lordly Shorthorn.

There are several contributing causes. The San Jose scale and the peach-yellows were both doing considerable damage, and many orchards had to be destroyed entirely. Then the uncertainty of the crop and the difficulty in coöperating in handling such enormous crops as good years brought discouraged some. Probably the chief reason is found in the fact that a peach-tree to one who has inherited and absorbed a love for live stock cannot cause such swellings of pride in the breast of the owner as can a beautiful animal. To him his peach-tree was very like another's, and possessed no interest beyond its revenue-producing qualities. But with his horse, his cow or his Merino each had individual qualities that distinguished them from all others.

It is reported of one of the money-lenders (most of the farmers in the limestone section are money-lenders) that a certain man came to borrow five hundred dollars. The security was satisfactory, and the man was on the point of drawing up a note when he suddenly thought of a very fine Shorthorn calf out in the stable. "Just come out and see a sight good for gods and men," exclaimed he, enthusiastically.

They went to the barn, but the applicant for a loan showed only just enough interest and enthusiasm as he thought necessary to get the money. His eyes wandered, and he jingled a few loose coppers in his pocket in a limp fashion.

The owner looked up, an ominous glow in his eyes. "Can't let you have the money," said he, quietly.

"Why—why—"

"It's no use," said he, waving him off. "A man that can't see beauty enough to enthuse him wrapped up in a good red calf will never be able to make a living. Good-by."

This incident, I think, explains why many of the farmers in the richer sections have given up their orchards. Probably it is for the best. Those who stay in the business will do so because they love it, or because their farms, by reason of soil-exposure and location, are peculiarly adapted to peach-growing. Finer peaches will be raised, and better prices realized.

ECONOMIC VALUE OF BIRDS

The economic value of birds to man lies in the service they render in preventing the undue increase of insects, in devouring small rodents, in destroying the seeds of harmful plants, and in acting as scavengers.

Leading entomologists estimate that insects cause an annual loss of at least two hundred million dollars to the agricultural interests of the United States. The statement seems incredible, but is based upon reliable statistics. This of course does not include the damage done to ornamental shrubbery, shade and forest trees. But if insects are the natural enemies of vegetation, birds are the natural enemies of insects. Consider for a moment what the birds are doing for us any summer day, when insects are so abundant that the hum of their united voices becomes an inherent part of the air.

In the air swallows and swifts are coursing rapidly to and fro, ever in pursuit of the insects, which constitute their sole food. When they retire the nighthawks and whippoorwills will take up the chase, catching moths and other nocturnal insects which would escape day-flying birds. The flycatchers lie in wait, darting from ambush at passing prey, and with a suggestive click of the bill returning to their post. The warblers, light, active creatures, flutter about the terminal foliage, and with almost the skill of a hummingbird pick insects from leaf or blossom. The vireos patiently explore the under sides of leaves and odd nooks and corners to see that no skulker escapes. The woodpeckers, nuthatches and creepers attend to the tree trunks and limbs, examining carefully each inch of bark for insects' eggs and larvæ, or excavating for the ants and borers they hear at work within. On the ground the hunt is continued by the thrushes, sparrows and other birds, who feed upon the innumerable forms of terrestrial insects. Few places in which insects exist are neglected; even some species which pass their earlier stages or entire lives in the water are preyed upon by aquatic birds.

As destroyers of the seeds of harmful plants the good done by birds cannot be overestimated. From late fall to early spring seeds form the only food of many birds, and every keeper of cage-birds can realize how many a bird may eat in a day. Thus, while the chickadees, nuthatches, woodpeckers and some other winter birds are ridding the trees of myriads of insects' eggs and larvæ, the granivorous birds are reaping a crop of seeds, which if left to germinate would cause a heavy loss to our agricultural interests.—From Chapman's "Bird-Life."

Irrevocable

The Future like a sealed book is,
However we may yearn;
The Past is like a borrowed one—
It never will return.

—New York Times.

Sunday Reading

THE DISCIPLINE OF PRAYER

WHAT is prayer for? Not to inform God or to move him unwillingly to have mercy, as if, like some proud prince, he required a certain amount of recognition of his greatness as the price of his favor, but to fit our own hearts by conscious need and the true desire and dependence to receive the gift which he is ever willing to give, but we are not always ready to receive.—Alexander Maclaren.

JOHN WESLEY ON MONEY

A farmer once went to hear John Wesley preach. The preacher was talking chiefly about money.

His first head was, "Get all you can." The farmer nudged his neighbor, and said, "That man has got something in him; it is admirable preaching."

Wesley reached his second division. "Save all you can." The farmer became quite excited. "Was there ever anything like this?" he said.

The preacher denounced thriftlessness and waste, and the farmer rubbed his hands as he thought, "And all this have I been taught from my youth up." What with getting and with hoarding, it seemed to him that "salvation" had come to his house.

Wesley went to his third head, which was, "Give all you can." "Oh, dear! he has gone and spoiled it all," exclaimed the listener. But getting without giving makes only stagnant fools of us.

WHEN MRS. HAYES WON THE POINT

The following story was one of those told by the late William M. Evarts, who was Secretary of State in the Cabinet of President Hayes:

"Speaking of diplomats reminds me that Mrs. Hayes, who was a stanch teetotaler, argued with me for an hour over the first dinner the President was to give to the foreign representatives. I tried to make her see that it would be no sacrifice of principle on her part to set wine on the table, but only the civility we always show to guests by recognizing their ways of living at home.

"'I'm afraid,' she declared, 'that the ministers will have to make up their minds to be sociable with water.'

"And I shocked her dreadfully by answering, 'Mrs. Hayes, I have never known people to be sociable with water except in a bath.'"

"Did Mrs. Hayes carry her point?" he was asked.

"Yes, indeed," he responded, with a dry chuckle. "She had the dinner as she wanted it, and the water flowed like champagne."—Ram's Horn.

BEER AND BREAD

In a recent issue you say, "Anarchists want to get bread by force, but they seem willing to pay for beer." Yes, and how much do they pay? The anarchists are only a very small wing of the laboring-classes of our country. It is hardly worth while to find out how much they pay for beer and whisky, but the millions of working-people pay over seven hundred and thirty million dollars every year for that which is not bread. Why not remind them of this fact? They are the main support of the colossal rum traffic which boasts of drawing into its coffers nine hundred million dollars annually.

The laboring-people of the country spend more for whisky and beer than the entire banking capital of the nation. If they would save what they spend in this way, and start banks, they would soon have ten thousand banks with two million two hundred and fifty thousand dollars capital. Don't get the figures wrong. I'll write it out, so there will be no mistake. In three years, by saving what they pour down their throats, they could have banks running in their interest, with an aggregate capital of two million two hundred and fifty thousand a year to be divided among them. Put this at them, and put it strong—the way for the poor to get rich is to stop "spending their money for that which is not bread, and their labor for that which satisfieth not." Oh, for a public press that will speak fearlessly on this subject!—Chaplain McCabe, in Pittsburg Chronicle-Telegram.

RIGHT ABOUT, FACE!

If you and I have set our lives in the wrong direction the stroke of the clock at the midnight hour is not going to stop us. If we have been sowing bad seed in the field, it will spring up and bear an evil harvest as sure as the winds blow and summer days overlap night. The main question is not what o'clock is it, but which way am I headed? There will never be a century born which can make us good, useful or happy unless we take the matter in hand ourselves. Time can never drop the word "repent," and to the end of days the prophet must shout to the man who is going the wrong way, "Right about, face!"—The Advance.

ENJOY LIFE AS YOU GO

As she passed beyond the edge of the woodland, on her way into its depths, where she expected to find the choicest treasures and to hear the sweetest secrets in the stillness, Sylvia noticed a fine spray of goldenrod, the first of the season.

"How beautiful that is!" she exclaimed. "When I come back I will gather it and take it home." But the wood-pilgrim wandered about and in and out, following beguiling little paths that seemed to go everywhere and led nowhere, after all; and when she turned her face homeward she came out of the wood a long distance from where she had entered it. The place was not very familiar; and Sylvia, while thinking that she knew where she was, searched everywhere about for the goldenrod left. She could not find it, nor any like it, and went home without the coveted bloom.

"The next time I'll take it as I pass, and not wait till I come back," she resolved, with wisdom born of disappointment. "The safe way is to take such things when you see them first, otherwise you may miss them altogether."

There is a little sermon wrapped up in this reflection about the goldenrod. Expand it and it may prove practical. Learn to take the little sweetnesses and pleasant things of life as you go, and do not be in haste to go farther, promising to enjoy the first things upon the edge as you return. It may be impossible to find them again. And when a bright little opportunity blossoms as you pass, stop to pluck and use it. You may not pass that way again.—Julia H. Johnston, in Bright Threads.

Persons who are to transform the world must be themselves transformed. Life must be full of inspiration. If education is valuable, the age must double it; if art is sweet and high, we must double its richness and might; if philanthropy is divine, we must double its quantity and tenderness; if religion is valuable, double its truths and hasten with it unto more firesides; if man's life is great, let him count more precious all its summers and winters. The one duty of life is to lessen every vice and enlarge every virtue.—David Swing.

The Family Lawyer

By JUDGE WM. M. ROCKEL

Legal inquiries of general interest from our regular subscribers will be answered in this department free of charge. Querists desiring an immediate answer by mail should remit one dollar, addressed "Law Department," this office.

SPRING IN HIGHWAY.—J. H., Pennsylvania, inquires: "A spring is located on a highway running through my farm, and the supervisor wishes to close the same. Can he do so?" Unless it is necessary to close the spring in order to properly construct and maintain the road the supervisor has no right to close up the spring or interfere with it. The spring belongs to the owner of the land, and can only be interfered with when a proper use of the public highway demands the same.

HEIRS UNDER THE LAW.—G. L., Pennsylvania, wants to know: "If a man dies without a will, what portion of his estate will go to his wife and what portion to his children? Also, can girls hold equal share with the boys? Please give the law in Ohio and Pennsylvania." In Ohio, if a man dies without a will his widow will receive a life estate in one third of his real estate and one half of the first four hundred dollars and one third of the remainder of the personal property, the rest going to his children, share and share alike. Substantially the same rule applies in Pennsylvania—there is no distinction between boys and girls.

D. C. W., Ohio, inquires: "My neighbor has sold his farm, which adjoins mine, to two different men, and one of them joins most of my share of line-fence, which is a good fence, and he claims half of it. The other man had very poor fence, and the purchaser wants me to build half of what joins him, while heretofore about one fifth of it was my fence. Can I be compelled to keep up half of this fence till it is made as good as the fence I have built as formerly divided? The former owner and all parties are responsible. None of the fence I built can well be moved. What is the law and the justice in such a case?" An answer giving the law in the above case is not easy. The justice of the matter would be much easier. In the first place, the land having acquired separate owners of separate tracts, a new adjustment of the partition fence must be made. I assume it to be the law that when a person buys a farm he is bound to take notice of the apportionment of partition fences, and therefore the purchasers are bound to know the location of the half of the line-fence which was to be kept up by the person from whom they bought their land, and that they would be obliged to keep up the same portion. You cannot be compelled to keep up any other part of the fence than that which has been heretofore assigned you, without a new assignment from the township trustees. The trustees in making such new assignment should take into consideration the fence that you have already built, and they should in assigning you a new portion require the persons who have bought the adjoining lands to either build that part which you are required to make or pay you for the part of the fence which might be left or given to them. The general practice in such cases has been for the party to move his fence. The trustees ought in the new assignment to follow that rule which will be just and right. There is no reason why you should be required to bear any loss in this matter. The purchasers of the adjoining lands should adjust the fence-question by building the share heretofore allotted the person from whom they bought in as good a condition as yours is, and then make a new apportionment.

The Family Physician

By ROBERT B. HOUSE, M.D.

Emerson says, "There is no beautifier of complexion, form or behavior like the wish to scatter joy, and not pain, around us."

A rapid pulse soon after the receipt of a traumatic injury to the brain points to contusion or laceration rather than to hemorrhage or compression. It must be borne in mind that injuries to the brain, sufficiently severe to prove rapidly fatal, are usually attended by a frequent pulse soon after the injury.

SOCIETY AS THE DOCTOR SAW IT

When the doctor was asked what he thought of the reception he had attended the previous evening, he said, "It was a carbuncle."

"What do you mean by that?"

"Why, it was a great gathering and a swell affair."

AIR AND WATER

"Air and water," says the "Medical Brief," "are two remedies apt to be overlooked by the profession in the search for cures. Yet as all progress is constantly bringing us back to, and accentuating the value of, first principles, we occasionally find cases on whom all medicines have lost effect, and who yet can be restored by the intelligent use of these two natural agencies. We have a case in mind at this writing. The patient had been an invalid for years. She had been the round of doctors and pathies, and had experimented with all the fads at home and abroad, with only temporary benefit. At length she fell into the hands of a common-sense doctor in a little country town where she was passing the summer. He regulated her diet, and established her habits on a sound hygienic basis. Then he taught her how to breathe (something which many people do not know), and insisted that she drop everything and devote a few minutes several times a day to proper breathing. Also, and most important of all, that she drink a glassful of water every hour of the day while awake. She followed his directions to the letter, principally out of curiosity at first, but later because she began to see the good effects of the treatment. Her color improved, her flesh became firm and her bowels regular. In six months she was perfectly well.

"The tissues of this woman were full of impurities, which the increased supply of oxygen and water either burned up or flushed out in the proper channels of elimination. The circulation and excretory organs felt the stimulus of the additional fluid, and increased their work. When the autotoxemia was relieved all the unpleasant symptoms subsided.

"The good effects which follow a sojourn at the various mineral springs are due chiefly to the large amount of water drank, and the moderate, but regular amount of exercise involved in getting it.

"Consumption is a house-air disease; probably catarrh is, also. In all chronic diseases there is a condition of self-poisoning. Here the remedial value of air and water is not half appreciated. Give your patients a tablet, to be dissolved in a glassful of water, or a small vial from which a few drops may be added, to insure that they drink the full amount. Insist upon their going outside, warmly wrapped in cold or inclement weather, and breathing deeply, slowly and regularly at certain intervals during the day. At the end of a few weeks or months you will be perfectly astounded at the alteration for the better effected in apparently desperate cases, without a drop of medicine. Try it."—Dietetic and Hygienic Gazette.

A Reflex Influence

BY SUSIE BOUCHELLE WIGHT

CHAPTER I.

TOM CHANNING once remarked to a friend that the Bates menage reminded him of two sober old pussy-cats trying to mother a great young tiger. The humor of this opinion appealed strongly to this friend, who was not distinguished for her tactfulness, and when she repeated it to the interested parties, expecting a hearty laugh, she was frozen by a haughty stare from all three of them. Tom also discovered afterward that although he was a family favorite, his attempt at wit had not been counted unto him for righteousness.

There was some truth in the unfortunate metaphor, however, for it was indeed a peculiar state of affairs which prevailed in the tall white house on the crest of the hill just out of Sedgwick. As Miss Stasia tersely expressed it, "Sylvia's father could not have muddled matters worse if he had tried." He had come back to Sedgwick from a long residence abroad, broken in health and spirit, bringing with him his motherless child, a little girl of eight. His contact with his own world had left him so sore that his one wish was that Sylvia should be reared amid simpler surroundings, and so form different ideals from his own. He sought out the two daughters of a former overseer of his father's plantation, because they were the two persons in all the world in whose integrity and innate goodness he had perfect confidence. Miss Mary's affectionate nature would soon enfold the child in something like the mother-love she had never known, while Miss Stasia's shrewd judgment made her a safe guardian for the child's inheritance, until at twenty-one she should take charge of it herself. His will provided that they should have sole care of Sylvia, and rear her according to their own ideals. His dying wish to his child was that she should yield herself fully to their authority. He had taken upon himself, however, the responsibility of planning her education. He mapped out very minutely a course of study and travel that the two simple ladies could in nowise understand, and the result was that Sylvia had year by year grown farther apart from her old-fashioned guardians, until as her majority approached her whole soul was fretting to get away from the narrowness of life in Sedgwick.

Charles Farrar's system had been a success in one thing—as the girl grew into beautiful womanhood she felt no craving for the pleasures of that world which had left his own heart so unsatisfied. She was insatiate in her quest for knowledge, and was fond of poking into all sorts of theories of life. She would talk evolution until she fairly made Miss Mary's head swim, and Miss Stasia would command silence. All religions appealed to her curiosity—none of them to her faith. Her heart was very warm and tender, and any form of suffering never failed to touch her deeply and call forth efforts for its relief. Her plans were always original and very independent; but at a word from Miss Stasia she would give them up at once, for her father's wish was sacred to her. It is due to Miss Stasia to say that she never interfered unless it seemed to her very necessary, and Sylvia's obedience, though implicit, had an ineffable quality which made it most apparent that though her body was subject to the law as laid down to her, her spirit was as untrammeled as the ocean air. All situations come to an end at last, however, and so did the time for her freedom.

The June morning was sweet with the fragrance of pinks and roses in the garden, and the mocking-birds were singing like mad in the trees.

"Mary Martha," said Miss Stasia, as she walked into the dining-room where the younger and gentler lady was busying herself around the breakfast-table, "did you remember that this is Sylvia's twenty-first birthday?"

"Good gracious, no!" Mary Martha answered, dropping a handful of spoons with a clatter. She stooped to pick them up, and then straightened up to look helplessly at Miss Stasia. "Whatever will we do, you reckon?" she said at length.

"Whatever will she do you'd better say," retorted her sister.

"I don't see how it slipped my mind so completely," said Miss Mary; "but I declare I don't believe she has throwed it up to us a single time since that day when you made her take off that short skirt and the leggin's."

"Yes, once," corrected Miss Stasia. "The time when I made her burn that book!" Both sisters blushed faintly at the recollection of the occasion, and Sylvia's ostentatious politeness when she had inquired how they could know it was unfit for her to read unless they had read it themselves. Curiosity had prompted Miss Stasia to look through the pages of a much-talked-of book, and becoming interested she had read on and on. Miss Mary had followed her example, and they did not suspect that Sylvia was aware of their unwonted literary interest until her innocent query.

"There's no tellin' what she will do," said Miss Stasia, dubiously. "She knows all about Charlie's will, an' of course she must take charge of the money an' all to-day. It does seem wasteful, though, to let her have it, with so many cranky notions in her head about helpin' all sorts of folks with it."

"Well, sister, I would not worry. We did not ask Charlie Farrar to make us his child's 'guardeens.' We have done the very best we could with her, an' the gracious knows you have taken good care of the property he left in your hands. If she wastes it all, why, it's hers, an' she can come back here when she wants to, for it is her grandfather's old home, even if Charlie did will it to us. I think, though, she has settled down some lately, she has been so quiet like. Don't you think so, too?"

"No, I don't, an' you wouldn't, either, if you had the sense you ought to have been born with! Don't you know Sylvia has always had them quiet spells just before she put in to do somethin' perfectly outrageous?"

Miss Mary was accustomed to her sister's asperity, and gave no sign of discomfiture. "You reckon she will get out that skirt an' the leggin's?" she asked after a little pause.

"This clod stirs, Tommy, whenever I think of going to The Bend," said Sylvia

"Not if that is what you are expectin' her to do," replied Miss Stasia. "She is bound to break out in a bran'-new place this time."

"Well," said Miss Mary with a sigh, "she has certainly been a caution to raise, considerin' she's always been so healthy. There's no mistake about that. But I love the child!" Her tone was tentative, and she looked half wistfully at Miss Stasia as if expecting a like declaration. That wrinkled, brown little old lady, however, was most noncommittal in her countenance, with its small bright eyes and tightly shut lips. She stood by the window looking absently out to the long, low ridge of purply green rising gently tier after tier to the top of the hills in the distance. She turned back to the room only at the sound of a light footfall, and answered "Good-mornin'" to the greeting of the girl, who had come in. The girl was tall and fair, with great, honest eyes of that peculiar reddish brown one often sees with that burnished auburn hair which has a trick of lying in scallops around a face of the exquisite tints of the red-blonde type.

"I am celebrating my birthday by getting up without the shadow of a discussion, you see, Aunt Stasia. I have been enjoying the garden for quite awhile," she said, brightly, as she laid a sprig of fragrant green in front of each old lady.

"An' what is that for?" inquired Miss Stasia, coldly.

"It is the olive-branch of peace!" said Sylvia. "Long may it wave!" She paused. "Must I go into details? Well, then, in this day of my emancipation I wish to ratify a peace with you both, my dears, and all mankind. I have been a weariness and vexation to you, and sometimes my obedience has been of a rather strained quality—and our relations, also, I am afraid. But now let's forgive old scores, and begin all over again to get acquainted, but on a more equal footing. Can't we?" She threw a sweetness into her voice and eyes, and smiled as she leaned forward.

Miss Mary smiled back, and thrust the bit of green in her bosom, but Miss Stasia turned from the wheedling eyes distrustfully. Sylvia's little fanciful ways had always irritated her, and all this show of sweetness did not signify that no bomb was to be exploded in the camp directly.

Breakfast was eaten in silence. When it was finished the three still lingered. There was something which must be said, and they all shrank from it. At last Miss Stasia spoke. "I reckon you have made up your mind to somethin', Sylvia. Let's hear it! You know as much about your father's will as I do, and that you take charge of what he left in my hands for you when you are twenty-one."

"Yes," replied the girl. She rose, went to the window, and stood there for several moments looking out across the broad white road to the same purple slope which had met Miss Stasia's gaze. A few hours ago she had been so happy in the thought of being her own mistress, but now—she was more disappointed than she would have admitted that Miss Stasia had rejected her little overture of peace. The shade of sadness which clouded her face for a moment was quite gone when she turned to speak to the sisters. "Yes, I know," she repeated; "and, Aunties, I am almost sorry. I am like a prisoner who has not yet got used to the light. My freedom actually dazes me—there is so much of it."

"Haven't you made up your mind what to do yet, honey?" asked Miss Mary's gentle voice.

It hurt Sylvia a little that it seemed a settled conviction with them that she was going to make some radical change in her life. For the time she had forgotten how often, when she had chosen to do a thing, and been thwarted, she had said, "Ah, well, I will be twenty-one some day."

Miss Mary repeated her question.

"Yes and no," said Sylvia. "If I had been a boy, a profession would have been chosen for me years ago. As it is, I will have to choose one for myself. Just what it is to be I am not yet quite sure."

"A profession!" exclaimed Miss Stasia.

"A profession," echoed Sylvia, positively, and feeling more comfortable, for the latent opposition in Miss Stasia's tone aroused her own spirit, and she shook off her sentimental regrets, as she called them in thinking over the matter afterward.

"Well, for goodness' sake, what profession are you goin' to take up? Are you goin' to be a show-actor—I've always thought you hankered for that—or maybe you are goin' to teach school?" Miss Stasia was eyeing her severely, and the girl threw her head back, and laughed aloud.

"Now, you have not missed the mark so far," she said, "because just for the present, if my plans work out, I shall be a little of both for a while. Ah, here comes the reverend Tommy!" She nodded brightly to the young man who had entered the open door with the easy familiarity of one who had long had the freedom of the house. His clerical clothes contrasted queerly with the boyish face, and there was an unministerial twinkle in the sharp eyes which had at once taken in the situation, for the differences between Miss Stasia and her ward had for him all the entertaining and fascinating qualities of a well-acted play.

"Have a seat, Thomas," said Miss Stasia.

All three looked expectantly at Sylvia, who still stood by the window.

"Don't let me interrupt," Tom Channing begged, politely.

"Not at all," replied Sylvia, cordially. "I was merely beginning to outline to my Aunties my plans for the immediate future, while I am pondering over my prospective profession."

"Well, what are you a-drivin' at?" asked Miss Stasia, impatiently.

"Why, for the present I am going to take Clarissy, and go over yonder to The Bend." She motioned one hand out toward the hills in the distance. She spoke very quietly, and as no one ventured an interruption, she continued, "As you all know, I own a house there. Aunt Stasia refused to rent it to the kind of people who would live in it. I shall go there for a while, to study the folks there at The Bend. Incidentally I am going to see if I cannot be a sort of missionary to them, in so far as living a clean life in their midst may help them. I imagine they have heard more of preaching than they have seen of practising. What do you say to it?"

Tom Channing was regarding her curiously; Miss Mary leaned weakly back in her chair, but Miss Stasia was fairly bursting with speech.

"Think of it?" she cried. "Think of it? I've heard before of the cheek of the devil! I think it was one of your own expressions." ["Amen," ejaculated Tommy.] "I have always heard of missionaries as pious kind of folks, an' here you don't exactly scoff at religion—you don't care that much—"

"She scoffs at its ministers, though," interposed Tommy. "Give it to her, Aunt Stasia!"

Sylvia, with hands loosely clasped, stood looking coolly at the group. "Hush, Tommy," she said; "don't interrupt. Please continue, Aunt Stasia. I am interested in your opinions."

"You have never cared three straws for church-work here in Sedgwick, much as you have been exhorted to help, an' here you up an' say you are goin' to be a missionary! I can't understand it!"

"Let me explain further," said Sylvia. "I used the term 'missionary' for lack of one which would better express my meaning. I do not expect indorsement from the Sedgwick church or its ministers," she dropped a profound curtsy to Tommy. "They are entirely too busy prosecuting plans for the foreign heathen to notice those at their doors. I of course cannot preach, and I am afraid I have not yet learned to pray, but there are other things to do. I have often had thoughts about The Bend folks, and have plans I intend to try on them, though I do not expect to stay there a day longer than my experiments interest me." She raised her tall figure to its full height, in a sort of yawn. "And now good-morning to you all. I am going for a stroll this rare day in June."

"I'm coming, too," said the young man.

"Are you, really?" Sylvia asked, with high-arched brows and uplifted chin.

"With your permission," he corrected, and at her nod meekly followed her out into the fragrant air.

In very many things these two lifetime young friends were in close sympathy with each other, and although Sylvia often made Tom feel very much aware of her dignity, she could count on him never misunderstanding her. She smilingly quoted as they walked:

"Every clod feels a stir of might,
An instinct within that reaches and towers."

She laid one hand on her heart. "This clod stirs, Tommy, whenever I think of going to The Bend. Who knows but that I may be able to successfully do settlement-work there?"

He answered her by quoting:

"One sings to the wide world, and one to the nest—
To the nice ear of Nature which song is the best?"

She stopped a moment in the road. "Now, I do wonder, Tommy, if you are proposing to tie me down to a nest, after what I have told you so often? Because if you are you had best go back and leave me to take my walk alone."

"I was merely soliloquizing absent-mindedly," he replied, "though personally I think that nests are better for ladybirds than reckless flights hither and thither into the wide world. However, you have often assured me that my opinions are not worth your consideration, so we will proceed to discuss your plans from your own point of view, if it pleases you."

[TO BE CONTINUED]

HARRIET'S HUCKLEBERRIES

BY ELLIOT WALKER

"HATTIE, you fly around like a bit of scandal in a country village. What ails you this morning?" cried Polly Fanning, as her elder sister banged the tins about the buttery with an apparently unnecessary clatter.

Harriet poked her head around the door. Her thin cheeks were flushed with excitement and exertion, and her thoughtful brown eyes were unnaturally large and bright.

"I'm looking for pails," she replied. "We used to have a lot of them."

"Pails!" echoed Polly, in amazement. "What do you want with pails? The big eight-quart is up in the garret. I filled it with water, and put it there for a fire-extinguisher. The six-quart is down in the cellar full of tomatoes."

A few moments later a loud swash of water from the attic was followed by a howl of indignation underneath the parlor window, and a small boy, wrathful and dripping, tore into the kitchen.

"Who done it?" he yelled, jumping up and down before his astonished aunt. "Who done it, I say?"

"I didn't, Ellis; it must have been your Aunt Hattie—she poured my pail of water on you by mistake, I guess. It's too bad. Come, I'll help you change your things. Why, you are not very wet after all. It sort of spattered you."

"I'm soaked through and through," protested the boy, bitterly. "I'm 'most drownded. Oh, ain't she mean, though!"

"She didn't intend to, Ellis. Don't begin to cry now. Get a doughnut, and run out in the sun—you'll dry off in a few minutes."

"It'll take two doughnuts to dry me off," said the eight-year-old, looking more cheerful; "three, maybe," he added, rather doubtfully.

"Well, you may have two small ones. Remember, I'll trust you to pick them out, Ellis."

The abused one presently sneaked out of the woodshed, tightly clutching the two largest cakes the pan had contained. "I wasn't goin' to pick 'em over to find the little ones," he remarked to his easily soothed conscience.

"What is the matter with that boy?" asked Harriet, descending. "I certainly heard him scream."

"You doused him, that's all. He is all right now. Do sit down and tell me what is going on—a picnic?"

"Picnic! No! Business! Huckleberries!" ejaculated the other, sitting on the dresser and breathing fast. "There's no time to lose, either! The pasture-lot is full of them—just right to pick, and nobody knows it. I found it out this morning coming back from Savage's. I want you and Ellis and 'Gal' right away. We can get oceans of them by night."

Polly's mild blue eyes, so like her mother's, opened wide as she looked searchingly at her sister.

"You crazy thing!" she said. "Go up yourself, and get two or three quarts—that's all we can eat."

"Eat!" burst out Harriet. "I'm not going to eat them. I'm going to sell them, Polly."

"Sell them!" gasped her companion, in consternation. "Oh, Hattie, you can't peddle berries."

Harriet hopped off the dresser. "I can!" she said, decidedly. "And what's more, I'm going to! You are going with me, too. We need every cent we can pick up—you know that, Polly Fanning. Think of mother, and what she needs. Think of all we can get for a few dollars. Put your pride in your pocket, the same as I have, and start right in. If I am willing to do it, you should be. Goodness knows—" she stopped and swallowed, with tears in her eyes.

"I'll go," said her sister quickly. "You are a better woman than I am, Harriet." She stepped over and kissed the now streaming cheeks. "I'll get Mrs. Dabney to stay with mother, and hunt up 'Gal.' He is over in the meadow haying, but he can leave it. We can be ready in half an hour."

Harriet tossed her head, and felt for her handkerchief. "I'm a fool to cry—but I hate it just as much as you do. Mother needn't know. She would be so upset. Let's bang right along and not mind. We can pretend it's fun. It will be easier." She held her sister close for a moment. "Come," she said; "let's get started."

"Berryin', hey?" queried old Gamaliel Hooker. "Goin' ter sell 'em, hey? Course I'll go. I use ter be the best picker ever was. Goin' ter hitch up airly an' drive ter town with 'em, yer say."

He eyed Polly narrowly with a queer look blended with curiosity and affection. "Ye're two good gals," he said, with a sort of cluck, "an' I'm proud on ye. Does Mis' Fannin' know what ye're up ter?"

"No; we thought we wouldn't tell her, Gal."

"I wouldn't," said the old man; "might upsot her, bein' so weakly an'—an' notional. Run along now. I'll be right up to the house."

"He understands," thought the girl, as she went back. "Bless his heart! He may be only our hired man, but he is a gentleman all the same. I honestly think he really loves us. Why, I don't believe anything would induce him to leave. I don't see how he does so much."

Never were huckleberries so fit for picking as those fat, black, shining fellows loading the low bushes in the mountain pasture that pleasant afternoon in the early days of August. Never did nimble fingers work more industriously to fill the big tin pails with the wholesome spoil. To be sure, the collection of Ellis Wells had to be kept apart, being motley and full of sticks. The lips of the youthful Ellis were badly stained, and his round countenance somewhat streaked with purple, long before the sun sinking in the west warned his absorbed elders that their work must cease.

The tongue of Gamaliel Hooker had wagged cheerfully, and with hearty encouragement, keeping the two women in a state of constant merriment, as his drollery and tales of the "berry-pickin's" of his long ago lightened their hearts and labors.

The light, drifting clouds had given them comfortable alternations of sun and shade, and the dreaded afternoon in the heat had passed as a grateful relief from the humdrum household duties of the day.

"It's lucky we brought a big lunch," remarked Polly, as they prepared to start homeward. "I think Ellis has refreshed himself regularly every hour on what was left over. Every scrap is gone. Well, he has been contented, and had a good time. I'll be sorry when Frances sends for him next month."

"He's a good young 'un," observed Gal. "His appetite's mighty, but thet's the way with boys. He must hev picked two quarts an' e't about three. Goin' ter take him along to-morrer?"

"No, sir!" cried Harriet. "He stays with his grandmother and you."

"I'll look arter him," said the man. "Yer ma'll feed him everything in the house ef she's let to. Now I'll pick over yer berries an' fix 'em fer yer. Ye've got supper ter git, an' then go ter bed airly. I'll see ter it ye're started right in the mornin'."

Polly patted him on the arm. "You are a comfort in life, Gal," she said. "I don't know what we should do without you."

"Sho!" said the old fellow, embarrassed. "I don't do nothin'! Here we are hum ag'in, an' we had gre't pickin' an' a good time. Supper'll be ready in about half an' hour, I s'pose."

He carried in the berries, then walked out to the barn. "Two likely gals, an' purty," he ruminated, "an' good. How they hev growed up. Why, why! Hattie's 'most twenty-seven years old, an' little Polly's two years younger. Don't seem's ef it could be. An' I toted 'em 'round when they wa'n't knee-high. Their father—" He picked up a hay-fork, and thrust it savagely into the mow. "Dum it!" he muttered, "it don't seem right! Peddlin' berries—dum! An' three years ago we was all comfortable off. Then Sam had ter die. Last words he says ter me was, 'Gal, do what ye kin fer 'em. I hain't left much but the farm an' a good name.' An' little by little we've run down ter peddlin' berries. I didn't reely sense it afore. An' the old lady's never been the same, an' now she's roomatic.

"Where's young Cutter, I wanter know," his thoughts wandered on. "I thought sure he an' Hattie would make a match, but they fell out somehow. Now ef they hadn't it would hev all come out nice an' easy. His old man's died an' left him well fixed—big farm, an' money, too. Wonder what 'twas they fit about? None of my business, but I'd like ter know."

Gamaliel jammed a forkful of hay into the horse's manger. "Eat, yer old sinner," he observed; "ye're goin' ter town to-morrer a-peddlin'. Ef ye knowed it ye'd run away, I bet. Old Doctor Belton gin ye to Mis' Fannin' ten year ago come Thanksgiving. I kin see him now jest the way he done it. 'Here, darter,' says he, 'this colt is yer own. He comes of as good a fam'ly in his line as we do in our'n. Remember thet, Maria,' says he, 'an' treat him accordin'.'

"Lord! but them Beltons was high-notioned. It took the Doctor three year to forgive Sam fer bein' a farmer. 'Twa'n't his fault thet Mis' Fannin' up an' said she'd marry him or nobody. Whoa! Back up a little, Jason!"

The patient, blue-eyed, crippled mother was delighted that her girls had so enjoyed their little picnic. They must go often. So they were to drive to town the next day to do some errands. Perhaps they would meet some of her old friends. The girls winced. If they had time they might call on Mrs. Dennard. She was still living in the old homestead. The girls shuddered. They watched the fine-cut face in the dim glow of the shaded lamp as she rambled on about her girlhood, then stroked the soft, silvering hair, kissed the faded cheeks, and bade her good-night.

"She doesn't realize it," said Harriet, solemnly. "She lives so much in the past now that her present existence is like a dream. How will it end, Polly?"

Her sister shook her head. "We can only wait," she replied.

The morning dawned bright and cool, and the start was made long before their prospective customers thought of leaving their beds.

Gal had carefully covered the pails from view, and there was nothing to indicate the object of their expedition.

"I slipped in a couple of broilers," whispered the old man, just as Harriet took up the reins. "Ye kin git fifty cents apiece fer 'em."

The two drove away with forced smiles and mirthless farewells, and traversed a mile before either spoke.

"Berries!" observed the elder sister at last, with a hard little ring in her voice.

"Broilers!" replied Polly, mournfully. Then they both laughed. It was not a joyful sound, though, but the sort of laugh one gives when a joke is not understood, and appreciation is expected.

As they turned a bend in the road, a man driving a spirited horse approached them.

"Mercy!" cried Polly; "it's Andrew Cutter!" She glanced anxiously at her sister. Harriet's face was set as if carved in stone, her eyes staring straight at her horse's ears. Then the seldom-used whip fell sharply on Jason's flanks.

"Don't notice him, Polly," whispered the elder girl.

It was always a mistake to let the lash fall upon Jason. His proud spirit and ancient legs alike rebelled. Giving a snort of wrath, he jumped, reared up, and his driver pulling hard in her excitement, lost her balance, and fell ingloriously in the dust. There was a shock, a clatter, an exclamation of horror, and from the wagon-box a stream of huckleberries rolled into the road.

Polly never knew just how it happened, but a minute afterward she was holding Andrew Cutter's horse, while that gentleman and Harriet assisted the entangled Jason to his feet.

Somehow they were a long time adjusting the harness on the off side. Polly peered around at them, then looked away quickly, and drove a little distance down the road.

"He certainly kissed her, and she let him," she thought, excitedly. "They have made up at last! Oh, isn't it splendid!"

Ten minutes later the Fanning sisters went on their way to Prattville, and a tall man, with three pails of huckleberries and a pair of broilers in the back of his buggy, drove slowly to his home with a happy face.

Polly held something in her hand, something that crisped and crackled as she squeezed it. "He said it was to get things for mother, Hattie," she whispered, apologetically. "Was it all right to take it?"

"I—I guess so," replied Harriet, in a far-away voice. "I guess everything's all right."

"Them gals went an' sold pails an' all," wondered Gamaliel Hooker, as he rubbed Jason down late that afternoon. "They must hev done well, though, from the stuff they fetched back. Didn't fergit the old man, neither," he added, taking a new pipe from his pocket and gazing at it rapturously.

"Hello! If there ain't Andrew Cutter drivin' inter the yard. What's he comin' fer, I wanter know."

AN OLD SAW

A dear little maid came skipping out
In the glad new day, with a merry shout;
With dancing feet and flying hair,
She sang with joy in the morning air.

"Don't sing before breakfast; you'll cry before night!"
What a croak to darken the child's delight!
And the stupid old nurse, again and again,
Repeated the ancient, dull refrain.

The child paused, trying to understand,
But her eyes saw the great world rainbow-spanned;
Her light little feet hardly touched the earth,
And her soul brimmed over with innocent mirth.

"Never mind; don't listen, O sweet little maid!
Make sure of your morning song," I said;
"And if pain must meet you, why, all the more
Be glad of the rapture that came before.

"Oh, tears and sorrow are plenty enough!
Storms may be bitter and paths be rough,
But our tears should fall like the dear Earth's showers,
That help to ripen the fruits and flowers.

"So gladden the day with your blissful song;
Sing on while you may, dear, sweet and strong!
Make sure of your moments of pure delight,
No matter what trials may come before night."

—Celia Thaxter, in The Standard.

How soft the music of those village bells,
Falling at intervals upon the ear
In cadence sweet! now dying all away,
Now pealing loud again, and louder still,
Clear and sonorous as the gale comes on.
With easy force it opens all the cells
Where mem'ry slept. Whenever I have heard
A kindred melody, the scene recurs
And with it all its pleasures and its pains.

—Cowper.

How to Dress

OUR FASHIONS

JUNE is the month that is crowded with sewing, both for the dressmaker at her establishment or the dressmaker at home.

The warm weather is so soon in evidence, and if one is to be comfortably clad it must meet now with no delay. One cannot wait five weeks at this period for the completion of a thin dress, so all hands are busy.

The girl who can get together a stylish-appearing, beruffled thin gown that was of moderate cost in the the first place can distance entirely the girl who must spend half her time cajoling her dressmaker into promising her dress at a certain day, only to be quite disappointed when the day arrives.

The first cost of thin dresses is trivial compared with the sum-total after piling it with lace, insertion, black velvet ribbon trimmings and—the dressmaker's bill. So wise are they in their day who fit themselves to manufacture at least the fripperies of their own wardrobe. A girl who always appears well dressed has one tailor suit made at a first-class modiste's, perhaps one thin dress, making the rest herself. She took lessons, and was taught how, when she was learning some of the other lessons in life.

CHILD'S COSTUME

FOULARD SILK COSTUME

SUMMER-GOWN

MORNING-DRESS

MORNING-DRESS

One could not do better than to copy this model. The material is not of so much importance as the general look of the dress when made up. The use of a contrasting color as a piping to the band trimming finds favor with many, as scarlet and white upon a very dark blue has been seen upon several costumes.

All black hats are quite in favor, also black trimmed with écru or white; wear black or white gloves.

CHILD'S COSTUME

The making of little girls' clothes has become such an art that many mothers are detailing this part of their sewing to those who make it a specialty. In the charming little girl's frock one can see possibilities for various materials. In white batiste trimmed with strips of needlework and embroidery, with bands of insertion threaded with velvet, the dress can be elaborate enough for a dressy occasion, while if piqué or linen is employed a fancy braid can be used as a decoration, and the plaits stitched to form an independent trimming.

FOULARD SILK DRESS

In this dress, fashioned from one of the season's best models in foulard silk, one finds relief from the too-much-trimmed dress, and this adapts itself to a more sedate wearer. The waist in wide plaits from a yoke of lace overlaid upon white tucked silk is very becoming even to a face past its prime. The skirt is well flared by the foot-ruffle, and is trimmed with lace at the top and bottom.

These thin silks are better with a lining, which can be made of percaline or a coarse swiss. Unlined they must be accompanied by an underslip of silk or mercerized percaline—giving it a better body. An unlined skirt should never be worn directly over a white skirt, as the hang of the skirt is spoiled in this way.

Unless one can follow all the fads of the existing fashions it is best to keep to middle lines.

FASHIONABLE WALKING-COSTUME

In our illustration of this costume we give our readers one easily made at home. Any of the linens or heavier washing-goods is quite suitable for this style, as it lends itself better to the laying of deep plaits, and also to the stitching employed as a trimming. The plaits bring in the skirt to the desired closeness to the form at the waist, while allowing the desirable flare at the bottom of the skirt. No trimming is used, and the harmonious tone of the costume is accentuated by a tie and a belt, which must be alike —either of black velvet for a color, or of a color for an écru linen.

Any of these patterns furnished from this office for ten cents. Waist and skirt are separate patterns.

WALKING-COSTUME.—Waist, No. 4087. Bust measures, 32, 34, 36, 38 and 40 inches. Skirt, No. 4146. Waist measures, 22, 24, 26, 28, 30, 32 and 34 inches.

CHILD'S COSTUME, No. 4137. Sizes, 8, 10, 12 and 14 years.

SUMMER-GOWN.—Waist, No. 4145. Bust measures, 32, 34, 36, 38 and 40 inches. Skirt, No. 3881. Waist measures, 24, 26, 28, 30, 32 and 34 inches.

FOULARD SILK COSTUME.—Waist, No. 4138. Bust measures, 32, 34, 36, 38 and 40 inches. Skirt, No. 4092. Waist measures, 22, 24, 26, 28, 30, 32 and 34 inches.

MORNING-DRESS.—Waist No. 4173. Bust measures, 32, 34, 36, 38 and 40 inches. Skirt, No. 4139. Waist measures, 22, 24, 26, 28, 30, 32 and 34 inches.

LADIES WRAPPER.—No. 4140. Bust measures, 32, 34, 36, 38 and 40 inches.

SUMMER-GOWN

In the summer-gown, which is in one of the new swiss muslins in pastel-green, with embroidered figures of black and white, we give a dainty dress for summer-afternoon wear. The trimming is of cream guipure lace with feather-stitching in black, the full front and undersleeves of white chiffon or Persian lawn.

As everything must be excessively flaring to be just in style, two, and sometimes more, of the circular ruffles are employed to give this effect. Sometimes, in taking up the seams in the skirt, the ruffle will be found to be too long around. If so, the extra length should be taken out at the back seam; never crowd in any fullness. Commence in front to baste the ruffle on, sewing from each side of it.

It is in the indescribable things that never go with patterns that the home dressmaker fails. If one is a poor needlewoman, and with no particular aptitude for putting things together, it is false economy to attempt dress-making at home, as there is always some one who can be found who can do it better, and some other work may be your forte.

WALKING-COSTUME

LADIES WRAPPER

To many of us it is a boon to have a one-piece dress in which we can take a little more comfort than is usually found in a tight dress or one in two pieces. Made of dainty percale or any of the pretty ginghams this dress will find many friends. It has the "Gibson" effect in the waist, which so many like for the broad look it gives to the form.

Wit and Humor

Real, genuine fun, and "bushels" of it, is what you will get if you try counting the Dots on Page 19 of this issue.

HIS REASON

MISSIONARY—"Why did you not bring your wife with you to this country?"

Chinese heathen—"I flaidee I die; then some Melican man mally her, and he balbarian, and makee her do man's work—washee and sclubbee and cookee."—New York Weekly.

CASSIDY'S LUCK

Cassidy—"Oi was born in '68. an' a lucky t'ing it was fur me."

Casey—"Was it so? Phwy?"

Cassidy—"Well, ye sec th' twinty-nint' iv Febr'ary is me birthday, an' so if '68 hadn't been a lape-year Oi w'u'dn't 'a' been born at all, at all."—Philadelphia Press.

THE MINISTER'S GRIP

The minister was a great hand-shaker, shutting down like a vise. One day he shook a little boy's hand, and absent-mindedly gave it an awful squeeze as he said, "My little fellow, I hope you are pretty well to-day?"

With tears in his eyes the little boy answered, "I was till you shook hands with me."—The Little Chronicle.

HIS TASTE IN READING

One of the Washington statesmen recently received a letter from a constituent as follows:

"Please send me some of the volumes containing memorial addresses for dead members of Congress. There is nothing I read with so much pleasure as obituaries of congressmen."—New York Tribune.

GROUND FOR SUSPICION

"Mary," said the young matron's mother, "it seemed to me you were very cold to John this morning?"

"Yes," she replied; "I'm beginning to suspect him."

"The idea! You have no reason to, I'm sure."

"Haven't I! I dreamed last night that I saw him kissing another woman."—Philadelphia Press.

STANDING UP FOR PAW

"Say, paw."

"Well?"

"When I was over at the Upham's yistady they was some neighbors there, and they got to talkin' about you and maw, and one of them said you was such a conventional man, and then I said you wasn't half as conventional as maw, 'cause she's always goin' away to a convention of some kind or 'nother, and they laffed and laffed and laffed, and I been wonderin' ever since what—"

"Here's a quarter. Run out and buy yourself something. I think I hear your maw coming up the front steps."—Record-Herald.

THE SCOTCH RAILWAY-BUILDER

A Scotchman who had been employed nearly all his life in the building of railways in the Highlands of Scotland came to this country in his later years, and settled in a new section on the plains of the Far West. Soon after his arrival a project came up in his new home for the construction of a railway through the district, and the Scotchman was applied to as a man of experience in such matters.

"Hoot, mon!" said he to the spokesman of the scheme, "ye canna build a railway across this country."

"Why not, Mr. Ferguson?"

"Why not?" he repeated, with an air of effectually settling the whole matter. "Why not? Dae ye no see the country's as flat as a floor, and ye dinna hae ony place whatever to run your tunnels through?"—Saxby's Magazine.

PASSING THE PREVIOUS QUESTION

The not wholly peaceful and quakerlike meetings of the new board of aldermen called forth a rather appropriate story from District Attorney Jerome the other day.

"I am reminded," he said, "of a story old Senator Nesmith, of Oregon, one of the first settlers of that state, used to tell. At the time when Oregon was admitted as a state, and the first legislature of the state met, Nesmith, who was a member, possessed himself of a copy of a book on parliamentary procedure. This work, which was at the time probably the only one of its sort west of the Mississippi, he studied diligently, and by the time of the first session was well up in the rules of debate.

"At the first meeting of the new legislature a motion was introduced and speedily carried, but on the second measure a dispute arose, and for three days the state legislators wrangled and debated.

"Finally, on the third day, Nesmith, who had watched the proceedings without even opening his mouth, decided it was time to use a piece of his parliamentary procedure, so he rose, and moved the 'previous question.'

"There was a moment of silence following this motion, and then amid a shout of derision the speaker cried, 'Sit down, you fool! We passed the previous question three days ago.' "—New York Tribune.

BEWARE OF PICKPOCKETS

All things may be carried to excess. There is even such a thing as overprudence. Mrs. Blank, wife of a well-known preacher, has reason to believe this.

One day when she was down town shopping she happened to board a rather crowded street-car. Scarcely had she seated herself when a man dropped into the place beside her, and let his hand fall.

Immediately the feeling that he was about to rob her, for she thought him a pickpocket, overcame her, and she grasped his hand as it fell to his side.

At first the man blushed; but rather than create a scene he allowed his hand to remain in hers.

Several blocks were passed, and the conductor shouted, "Fifth and Hennepin."

The gentleman leaned over, and whispered in Mrs. Blank's ear, "Madam, if you will kindly release my hand I will get off."

Mrs. Blank let go his hand. Scarcely had the car started again when a man in the seat behind her leaned over, and said, "Madam, I presume you mistook that man for a pickpocket."

"I did, sir," said the lady. "Was he not?"

"No," calmly answered the other; "he was Rev. Doctor Brown, rector of St. Paul's Church."

Mrs. Blank left the car at the next stop.—Epworth Herald.

The Young People

DIDN'T KNOW THEY WERE LOADED

A LITTLE two-year-old boy was visiting with his mother at his grandmother's place at the lake. One day he was missing for a short time. When his mother found him she was surprised to see him standing in front of one of the beehives with a long switch in his little hand.

On being asked what he was doing he said, "I's ticklen de bees."—The Little Chronicle.

A KIND THOUGHT

From a lady's porch the other day I saw a number of birds come down and alight on the edge of a large bucket of water by the well. Some of them drank and then flew away, but others threw water over themselves, and then sat there preening their feathers and chirping happily. Then came two dogs, which took a drink and ran away. Afterward I saw a cat come up to the bucket, and then a chicken.

"Are all these pets of yours?" I asked.

"Oh, no!" said the lady; "but we always keep that bucket filled, and all the tired, thirsty birds and animals in the neighborhood come to it, and seem very thankful for a drink and a bath."—Sunbeam.

WHAT HAPPENED TO LLOYD'S TOAD

Lloyd was fond of all the creation that lived in the garden, from the robins high up in the apple-tree to the little ants which built their homes in the gravel walks. He was always careful not to hurt any of them, but he thought some of them more interesting than others. There was a toad which he called his, and he fed it with crumbs every day. He liked to watch it as it hopped about among the plants, darting out its bright red tongue to catch any small insects which came in its way.

One day Lloyd ran to his mother in great excitement.

"My toad is trying to get his skin off!" he cried.

It was true. When Lloyd and his mother reached the toad they saw him pulling his skin over his head, much in the same way that a little girl would take off her high-necked, long-sleeved apron, only it was harder work for him.

He tugged away with his fore feet, however, until he was free, and then what a bright new coat he displayed.

Lloyd was delighted, and he asked many questions about toads, and the way in which they changed their coats.—Emma C. Dowd, in Our Little Ones.

LESSON FOR A BOY

I had overheard a conversation between Karl and his mother. She had work for him to do, which interfered with some of his plans for enjoyment, and though Karl obeyed her, it was not without a good deal of grumbling. He had much to say about never being allowed to do as he pleased, and that it would be time enough for him to settle down to work when he was older. While the sense of injury was strong upon him I came out on the piazza beside him, and said, "Karl, why do you try to break that colt of yours?"

The boy looked up in surprise. "Why, I want him to be good for something."

"But he likes his own way," I objected. "Why shouldn't he have it?"

By this time Karl was staring at me in perplexity. "I'd like to know the good of a horse that always has his own way!" he said, as if rather indignant at my lack of common sense.

"And as for working," I went on. "I thould think there was time enough for that when he gets to be an old horse."

"Why, don't you see, if he doesn't learn when he's a colt—" Karl began. Then he stopped, blushed, and looked at me rather appealingly. I heard no more complaints from him that day.—Church Record.

GORILLA-HUNTING

Gorilla-hunting is a distinct sensation even for the veteran hunter. This animal, which has become confused somewhat with fable and fiction, is a reality, and a decidedly unpleasant one to engage. The West Africans are mortally afraid of it, believing that the brute contains the spirit of a man. They attribute to it all sorts of ferocities, like the carrying off of a human being, who is permitted to return after being deprived of toe-nails and finger-nails.

Skilled hunters have never observed any of these doings, but they testify to the brute's strength and ferocity. According to a French sportsman, a full-grown gorilla can bite through a tree six inches thick in order to secure the sap, and twist a gun-barrel with the swollen bunches of muscle that serve for arms. His roar is terrifying, and can be heard for a distance of three miles.

"I shall never forget how the first one impressed me," says the Frenchman, "for I had a bad attack of shakes. The woods had been filled for some time with a barking roar, but I saw nothing until my guide clucked softly and pointed to a tree, alongside which stood an immense male gorilla. There he remained, but twelve yards away, boldly facing us with his huge chest, muscular arms, fiercely glaring deep-gray eyes and a hellish expression, until I moved.

"At that he dropped to all fours and came six yards nearer, sitting up to beat his breast with his huge fists—a defiance—so that it sounded like an immense drum. His roar was most singular, beginning with a kind of bark and deepening into a bass roll that literally resembled thunder. The short hair on his forehead was twitching, his powerful fangs showed unpleasantly, and feeling he was about to attack, and incidentally being scared green, I shot him through the heart. With a groan something human and yet brutish, he fell on his face and died quickly, like a man. He measured five feet nine inches in length, his chest was sixty-two inches, and his arms spread nine feet. I was glad to have the specimen, but somehow after that never cared to kill a gorilla unless he actually menaced me."—Allen Sangree, in Ainslee's.

GRANDMA

BY ELLIOTT WALKER

In her rocking-chair she's nodding,
  While the twilight's fading glow
Dims with delicate enchantment
  What her hair and wrinkles show.
By her side has dropped her knitting
  For the kitten's noiseless leap—
Soft reproved by baby-whispers,
  Chiding, "Grandmama's asleep."

When the Great Sleep has enwrapped her
  May we dream her slumb'ring there—
The sweet picture of old Grandma
  In her cozy rocking-chair.
With the children and the kitten,
  As the twilight shadows creep,
And the hush of little voices
  Whisp'ring, "Grandmama's asleep."

Farm Selections

NEWS-NOTES

A COMPANY has been organized at Saginaw, Mich., for the purpose of manufacturing syrup and vinegar from the refuse molasses of sugar-beets. The grade of vinegar is said to be excellent.

Southern California, not to be outdone in the culture of any fruit or grain product, will begin this year the growing of rice between Corona and West Riverside. The water of the Santa Ana River will be utilized to flood the rice-fields, and the method of culture will be that used by the rice-growers in Louisiana and Texas.

The growth of the dairy industry in Minnesota as shown by the United States census reports of 1890 and that of 1900 is a credit to the state. There has been an increase in the value of dairy products of over seventeen million dollars in ten years. The annual value of the output derived from this source alone is expected to soon reach fifty million dollars.

The novel idea of canning sauer-kraut originated with the manager of the "Webster (New York) Preserving Company" five years ago, when three hundred cases of twenty-four cans each were packed. Last season the output was six hundred and fifty thousand cans, and this year additional buildings are being erected for the still further extension of the business.

* * *

RECENT PUBLICATIONS

BOOKS NOTICED

THE TREE-DOCTOR. A book on tree culture, profusely illustrated with photographs. By John Davey, Akron, Ohio. Price $1.

SOILING, ENSILAGE, AND STABLE CONSTRUCTION. By Frank Sherman Peer. Price $1. Published by Randolph R. Beam, New York City.

MARGARET BOWLBY. A love-story. By Edgar L. Vincent. Cloth-bound, decorated cover; price $1.50. Published by Lothrop Publishing Company, Boston.

CATALOGUES RECEIVED

A. D. Lugibihl, Bluffton, Ohio. Descriptive circular of the Kibele cream-separator.

Doctor Hess & Clark, Ashland, Ohio. Doctor Hess' stock book and descriptive circular of stock-foods.

Roderick Lean Manufacturing Company, Mansfield, Ohio. Illustrated circular of the Butler steel hand-carts.

Greening Brothers, Monroe, Mich. Handsome nursery catalogue, fully illustrated with half-tones and color plates.

C. K. Sober, Lewisburg, Pa. A pamphlet describing the Sober chestnut groves, and telling how to utilize waste lands.

W. O. Hemlow, Woodland, Cal. "The Fruit-growers' Manual"—a guide for canning fruit, etc., and making jams, jellies, marmalades, etc.

The Side Delivery Buncher Company, Toledo, Ohio. Illustrated circular describing the side-delivery windrower and clover-buncher, made to fit any make of mower.

The DeLaval Separator Company, 74 Cortlandt Street, New York. Pamphlet giving a brief history of the Chicago, Paris, Buffalo and other recent cream-separator awards.

The Armour Fertilizer Works, Chicago, Ill. "The Feeding of Farm Animals"—a pamphlet describing packing-house feeds, such as blood-meal, meat-meal, bone-flour, special tankage, etc.

Wells W. Miller, Secretary State Board of Agriculture, Columbus, Ohio. Premiums and Regulations of the Fifty-second Annual Ohio State Fair and Industrial Exposition, to be held in Columbus, September 1-5, 1902.

Two heads are better than one—ten heads are ten times as good. Get nine of your friends to lend you their brains in exchange for the use of yours, and you will have ten times as good an opportunity by each sending in an estimate to win one of the cash prizes in our novel Dot Contest.

BEAUTIFUL PICTURES AND FREE COUNT IN THE DOT CONTEST

$1,500.00 CASH PRIZES

One Picture and One Count - - 25 Cents
Three Pictures and Three Counts - 60 Cents

These counts are on the number of dots in the diagram printed on Page 19 of this issue of the Farm and Fireside. Twenty-five cents entitles you to your choice of any one of the beautiful pictures described below, and also to one count of the dots. Sixty cents entitles you to three pictures, your choice, and three counts of the dots. This enters your count or counts in the dot contest the same as if you accepted the offer on Page 19. If possible, use the blank printed at the bottom of this page; or cut a piece of paper the same size of the blank.

LIST OF CASH PRIZES

FIRST PRIZE -	$500.00	Cash
Second Prize - - -	$200.00	Cash
Third Prize - - -	$100.00	Cash
4 Prizes, $25.00 each -	$100.00	Cash
10 Prizes, $10.00 each -	$100.00	Cash
40 Prizes, $5.00 each -	$200.00	Cash
150 Prizes, $2.00 each -	$300.00	Cash
Total -	$1,500.00	Cash

THE WORLD'S GREATEST PICTURES

MORE DESIRABLE THAN EXPENSIVE ENGRAVINGS

PHARAOH'S HORSES

Some competent judges pronounce our pictures more attractive and desirable than expensive engravings. Remember that including the margins they are TWENTY BY TWENTY-FIVE INCHES IN SIZE, FIVE HUNDRED SQUARE INCHES, about ten times the size of the reproductions commonly sold.

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ORDER BY NUMBER

No. 801 SUNSHINE AND SHADOW . . *Stone*
No. 805 I AM LORD OF ALL I SURVEY *Cleminson*
No. 789 DEFIANCE, or STAG AT BAY *Landseer*
No. 804 AN IMPUDENT PUPPY . . *Noble*
No. 803 GRACE DARLING AND HER FATHER . . . *Carmichael*
No. 806 ST. CECILIA . . . *Naajok*
No. 785 PHARAOH'S HORSES . . *Herring*
No. 795 WATERFALL BY MOONLIGHT . *Rieger*
No. 794 CAN'T YOU TALK . . . *Holmes*
No. 790 KISS ME (Child and Dogs) . *Holmes*
No. 796 THE HORSE FAIR . . *Bonheur*
No. 783 AFFECTION . . . . *Holmes*
No. 786 QUEEN OF FLOWERS . . *Lefler*
No. 787 AFTER WORK . . . . *Holmes*
No. 797 WASHINGTON CROSSING THE DELAWARE . . . . *Leutze*
No. 798 THE WOODLAND MOTHER . *Carter*
No. 799 THE STRAW YARD . *Herring*
No. 800 IN MEMORIAM . . . *Edwards*
No. 791 THE LITTLE SHEPHERDESS . *Koller*
No. 792 PORTRAIT OF WASHINGTON . *Staart*
No. 793 THE FINDING OF MOSES . *Schopin*
No. 784 IMMACULATE CONCEPTION . *Marillo*
No. 788 CHRIST BEFORE PILATE . *Mankacsy*

Size 20 by 25 Inches

These pictures are on the very FINEST AND MOST ELEGANT PICTURE-PAPER, beautiful ivory-finished, extra-heavy weight. They are SUPERB FOR FRAMING. The original oil-paintings from which these famous art works are reproduced cost HUNDREDS OF THOUSANDS OF DOLLARS and could not possibly be seen without a tour of the great art galleries of the world. The proprietors of these pictures have gone to great expense to make faithful reproductions. For illustrations of other pictures see recent issues of this paper, or write for our Picture Circular.

They are of sufficient size to bring out all the delicate effects of the originals.

They are the greatest achievement in artistic reproductions, combining at once the highest quality and low price.

They are unexcelled for beauty and clearness, and satisfy the most critical lovers of pictures. They will not and cannot fade. This is absolutely guaranteed.

You may accept any offer made in this issue for one year's subscription to the Farm and Fireside, and send one count with it. The Pictures will be sent by mail, securely packed and post-paid. Satisfaction guaranteed.

ADDRESS

FARM AND FIRESIDE, Springfield, Ohio

Cut along this line

FARM AND FIRESIDE
Springfield, Ohio

My count (or counts) of the dots is:

.....
.....
.....

Inclosed find .....
(Amount of money)

to pay for picture (or pictures) No. ....., ..., ...

Name .....

Post-office .....

County ..... *State* .....

Cut along this line

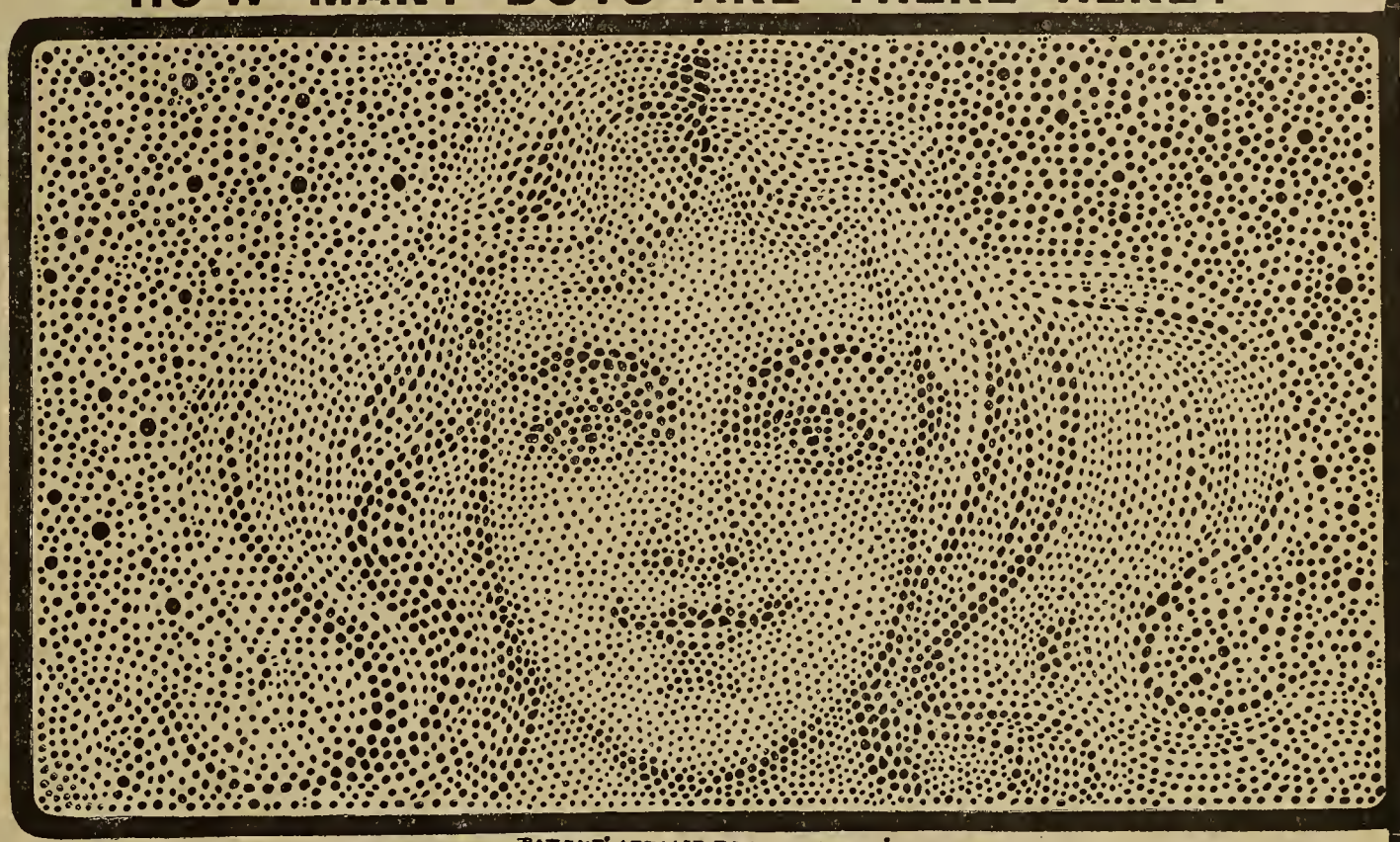
Cut along this line

$1,500.00 CASH PRIZES

HOW MANY DOTS ARE THERE HERE?

The Prizes Will be Awarded for the Correct or Nearest Correct Counts of the Dots in This Diagram.

207 CASH PRIZES



PATENT APPLIED FOR. 12-6-01

ONE GRAND PRIZE OF FIVE HUNDRED DOLLARS CASH

Every one sending 35 cents, the regular clubbing price, for one year's subscription to the Farm and Fireside, will be allowed ONE count of the dots free.

Three yearly subscriptions and *three* counts (either for yourself or others) for One Dollar.

REGULAR SUBSCRIBERS will have their time extended for a number of years equal to the full amount of money they send in. You may accept any offer we make in this June 15th number for a year's subscription to the FARM AND FIRESIDE and send one count with it.

What Other Way of Spending One Hour Will Offer You $500.00 Cash?

Here is a splendid opportunity to win a great cash prize as the reward of only a little perseverance and care. The exact number of the dots can be counted by any one at the price of a little time.

Use any method you wish in counting the dots. Exercise your ingenuity, and devise some means of insuring correctness in your count. One way of counting is to go over all the dots in a part of the diagram and then estimate the rest. But the best way is to count all of them.

You can count as many times as you want. Send 35 cents with each count. Each count will then be registered, and you will receive a full year's subscription to the FARM AND FIRESIDE for every 35 cents you send in.

The more counts you send in the greater your chance of winning one of the big cash prizes. Count the dots half a dozen times, and you will be almost sure to send in the correct answer.

WHAT IS YOUR TIME WORTH? Why not make it worth a hundred dollars an hour by winning the first prize in this great contest offer?

The count is absolutely free. Every cent paid is applied on your subscription.

This magnificent offer is made for the exclusive benefit of the readers of the FARM AND FIRESIDE. The contest is new, and was gotten up to test the skill of our readers, and to give them profitable amusement and entertainment. Send your count at once, and so make sure of being included in the list of contestants for these cash prizes.

Any one can count these dots. It costs nothing. At the same time the prizes are so great that you have a big chance of winning hundreds of dollars for the short time it takes to count the dots.

If two or more give the correct count the grand prize will be divided, and the same method will be adopted in awarding the other prizes.

Even if your answer is not correct you may get a prize, because the money goes to those who send in the correct **or nearest correct** counts. We do not care who wins the prizes. They are yours if you have the skill and perseverance.

No one employed by or connected in any way with the FARM AND FIRESIDE, nor any resident of Springfield, Ohio, or its suburbs, will be allowed to enter the contest.

If possible, use the subscription blank printed on this page; or, if desired, a sheet of paper may be used the same size as the blank printed on this page.

ADDRESS FARM AND FIRESIDE, SPRINGFIELD, OHIO

LIST OF CASH PRIZES

FIRST PRIZE - - -	$500.00 Cash
Second Prize - -	$200.00 Cash
Third Prize - - -	$100.00 Cash
4 Prizes, $25.00 each	$100.00 Cash
10 Prizes, $10.00 each	$100.00 Cash
40 Prizes, $5.00 each	$200.00 Cash
150 Prizes, $2.00 each	$300.00 Cash
Total	$1,500.00 Cash

Use This Coupon, if Possible, or Cut a Piece of Paper Same Size as This Coupon

Cut along this line

FARM AND FIRESIDE
Springfield, Ohio

Inclosed find .....
(*Amount of money*)

to pay for ..... *subscription*
(*State whether one or three years*)

to the Farm and Fireside.

My count (or counts) of the dots is:

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Cut along this line

Name .....

Post-office .....

County ..... *State* .....

Are you a new or old subscriber? .....
(*Write "New" or "Old"*)

Donald the Third

BY SCOTUS AMERICANUS

"Ho-ro, my nut-brown maiden, Hi-ri, my nut-brown maiden,
Ho-ro-ro, maiden! Oh, she's the maid for me!"

THESE words, carried on the wings of that fine old Gaelic melody, came from the stable of Glenbogie Farm one May afternoon as Donald the Third was putting the finishing touches to the toilet of his handsome jet-black horse, Roderick Dhu. From his boyhood this song had been a great favorite with Donald, and frequently in the field and in the house his rich tenor voice might be heard lilting these words, or the song might subside into a whistle or a hum.

This night Mary Brown, of the Glen Mills, Jim Henderson, of Crossford, and several other friends were expected to help celebrate the eighteenth birthday of his sister Jennie, and Donald expected to take Mary home after the festival, and, always careful and neat, he gave the buggy and Roderick Dhu and himself unusual attention that evening.

Mary, a beautiful brunette, just out of her teens, was the leading soprano in the village choir, admired for her many womanly virtues and much sought after on festive occasions, and more than one gallant from the Crossford village and several from the country coveted an invitation to the Mills, for "every one who knew her felt her gentle power."

The guests arrived early, and after an invigorating outdoor romp and a substantial supper, enlivened by much good-natured banter and laughter, they repaired to the parlors for music and games under the charge of Donald and Jennie, whose father and mother were left alone in the dining-room. Mrs. McPherson was a little surprised that her husband did not join the party, and remarked, "You are rather quiet to-night, Donald. What is troubling you?"

"Well, Mary, our boy Donald has become infatuated with Mexico, and what between gold and copper mines and coffee-plantations has figured himself a millionaire many times over. Cousin Frank and some speculators have been supplying him with pamphlets and prospectuses containing glowing accounts of the country and its resources, and I am afraid his natural caution will not prove sufficiently strong, and that he and Frank will set out in search of the ends of their imaginary rainbows."

"I hope," said his wife, "that Donald's better judgment will prevail, and that we can keep him here."

"Yes, Mary; Donald is such a reliable worker I need him to take charge of the farm. Since he took such a deep interest in stock-raising the Glenbogie herd of Scotch-bred Shorthorns has acquired a world-wide reputation, and he is better posted on many lines of farming than I, who am more than twice his age. Moreover, I am not so vigorous as I was twenty years ago, and a man who will take such an interest in the farm cannot be hired. We must, if possible, keep Donald here for our good, and his also."

"If we cannot, I think I know who can—"

Just then a bevy of girls, headed by Jennie, burst into the dining-room, and carried off Donald the Second perforce. There was no use trying to resist—they needed him to play "blindman's-buff." After this and other lively games even the youngest were very glad to seek chairs, and Grandpa McPherson, now over the threescore and ten, told some interesting short stories he had seen in their favorite paper, the FARM AND FIRESIDE, which twice a month he read from A to Z, and he and the other Donalds knew that to the careful study of this paper was chiefly due the success of the Glenbogie Farm.

"And such fine inducements the publishers make subscribers," said Jennie. "Why, just now they are offering $1,500 in prizes for counting dots; have you noticed that, Grandpa?"

"Yes, my lassie, and as a reminder of this occasion I am going to send the paper one year to each family represented here to-night. The FARM AND FIRESIDE is not so well known as it should be in this district. I explained my desire to the publishers, and they, as a special favor, sent me a dozen copies of the current issue, and you may each take a copy and count the dots, and I will send in the numbers along with the names. Now let me see who can carry off the $500 prize."

"It would be interesting to hear what each would do with the $500, should he or she get it," said Mother McPherson; and how this remark stirred the imaginations of the young folks!

"I would have a new upright piano like Jennie's" said Mary Brown.

"I would have a fine saddle-horse," said Jim Henderson.

"That would just solve my difficulty in paying for my course at the Chicago Dental College," said a third. The seven boys and eight girls each had a special need for the money.

"And what would our seven-year-old Willie do?" said father, lifting him on his shoulders.

"I'd buy a Shetland pony and a little cart for mama and me. I'd buy a ball and a bat and a knife and fine marbles and a big kite and a new swing and a top and—"

"But where would you keep all those things, Willie?"

"Why, papa, my pockets aren't half full yet," and he slid to the floor and went to quiz his brother Donald as to what he would do with the $500.

"I expect," said Donald, "that mother could make the best use of the money, and what I win I'll present to her."

"You are a good and faithful boy, Donald, and we could then carry out your father's plans to remodel the house."

But the conversation was getting too serious for such a crowd at such a time, and Jennie struck up some lively music, and songs and choruses made the evening pass only too soon. As usual, Donald and Mary were called on for solos and duets, and their voices seemed to blend as never before, and the sweet and gentle nut-brown Mary seemed the very complement of the tall, stalwart, blue-eyed, ruddy-cheeked, sandy-haired Donald. When, by special request, they sang that old-time duet, "Huntingtower," Mary's blushes showed she was rather embarrassed, for it was not leap-year; and indeed Donald looked as if he did not know what to do, and they both welcomed the "Home, Sweet Home," after which, with many joking comments on the Dot Contest, the guests took to their buggies, and Jennie's party was at an end.

By the time Donald and Roderick Dhu returned from the Mills all on the Glenbogie Farm was quiet, and indeed Donald was relieved to think no one knew the hour he got home; but next morning he was up bright and early, and his singing so impressed his mother that she surmised something had happened, especially when he came to this verse of his song:

"And when, with blossoms laden, bright summer comes again,
I'll fetch my nut-brown maiden down from the bonnie glen."

When after breakfast Donald whispered to his father and mother confidentially that the previous night he won the Grandest Prize, they understood what he meant; Mexico was forgotten, and within two weeks the masons and carpenters were at work remodeling, and the Crossforders, on no less an authority than that of Pastor Hume, say that at an early date the reign of Donald the Third and Mary the Second will be inaugurated at Glenbogie.

FINE NEW PATTERNS

These patterns retail in fashion bazaars and stores for twenty-five to forty cents each, but in order to increase the demand for our paper among strangers, and to make it more valuable than ever to our old friends, we offer them to the lady readers of our paper for the low price of only ***10 cents each.***

Full descriptions and directions—as the number of yards of material required, the number and names of the different pieces in the pattern, how to cut and fit and put the garment together—are sent with each pattern, *with a picture of the garment to go by.* These patterns are complete in every particular, there being a *separate* pattern for *every single piece* of the dress. All orders filled promptly.

For ladies, give BUST-measure in inches. For SKIRT patterns, give WAIST measure in inches. For misses, boys, girls or children, give both BREAST measure in inches and age in years. Order patterns by their numbers.

Satisfaction guaranteed or money refunded.

To get BUST and BREAST measure, put the tape-measure ALL of the way around the body, over the dress, close under the arms.

Special price of each pattern 10 cents.

Postage one cent EXTRA on skirt, tea-gown and other heavy patterns.

FREE We will give any TWO of these patterns for sending ONE yearly subscription, new or renewal, to the Farm and Fireside at the clubbing price of 35 cents.

Or we will send the Farm and Fireside One Year, new or renewal, and any ONE pattern for . . . . . **35 Cents**

ANY ONE ACCEPTING THIS OFFER IS ALSO ENTITLED TO ONE FREE COUNT IN THE DOT CONTEST. SEE PAGE 19 OF THIS PAPER.

Address FARM AND FIRESIDE, Springfield, Ohio

No. 4152.—CHILD'S DRESS. 10 cents. Sizes, 2 to 8 years.

No. 4150.—LADIES' SHIRT-WAIST. 10 cents. Sizes, 32 to 40 inches bust.

No. 4107.—LADIES' SAILOR-BLOUSE. 10 cents. Sizes, 32 to 40 inches bust.

No. 4136.—LADIES' NIGHT-GOWN, WITH BERTHA. 11c. Sizes, 32, 36 and 40 inches bust.

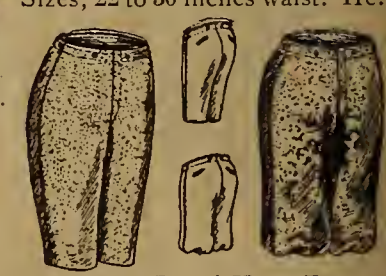
No. 4099.—LADIES' SHIRT-WAIST. 10c. Sizes, 32 to 44 inches bust.

No. 4137.—GIRLS' COSTUME. 10 cents. Sizes, 8 to 14 years.

No. 3980.—LADIES' WRAPPER WITH SQUARE YOKE. 11c. Sizes, 32 to 42 inches bust.

No. 4148.—CHILD'S BOX-PLAITED FROCK. 10 cents. Sizes, 2 to 6 years.

No. 4151.—LADIES' SEVEN-GORED FLARE WALKING-SKIRT. Sizes, 22 to 30 inches waist. 11c.



No. 4046.—BOYS' KNEE TROUSERS AND KNICKERBOCKERS. 10 cents. Sizes, 4 to 12 years.

No. 4066.—MISSES' SHIRT-WAIST. 10 cents. Sizes, 12 to 16 years.

No. 4144.—BOYS' KILT SKIRT. 10 cents. Sizes, 2 and 4 years.

No. 4054.—MISSES' SEAMLESS CORSET-COVER. 10 cents. Sizes, 12 to 16 years.

No. 4104.—LADIES' SIZE. 10c. Sizes, 32 to 44 inches bust.